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IN THIS ISSUE:

THE GOLDEN AGE OF MEDICINE — DAVISON

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VOLUME 16

JANUARY, 1955

NUMBER 1

THE GOLDEN AGE OF MEDICINE

WILBURT C. DAVISON, M.D.

DURHAM

More progress has been made in medicine in North Carolina and elsewhere during the past 50 years than in the preceding 50 thousand. It is hard to realize that prior to 1900 only two diseases—smallpox and scurvy—could be prevented, and that specific drugs were available for only three conditions—namely, malaria, worms and scabies. Quinine usually cured malaria, and worms succumbed to many remedies including garlic, the odor of which was offensive even to worms⁽¹⁾. When Naaman went down to wash in the River Jordan, the sulfur water cured his scabies, although the Bible called it leprosy. Patients suffering from other diseases either recovered spontaneously or died. In fact, some of the remedies used, such as drastic purgation and bleeding, were actually harmful.

A half century ago, many infants did not survive their first summer, as may be seen from a study of gravestones. For example, the following three inscriptions are in St. Johns Cemetery near Towson, Maryland—Frankie, son of David and Mary Hanna, born April 24, 1875, died July 8, 1875; Maggie, born May 27, 1876, died July 1, 1876; Johnny, born May 19, 1877, died July 28, 1877⁽²⁾. Even at the beginning of this century, 10 per cent of all infants died. Only the breastfed babies, and not all of those, survived. At present, the infant death rate is only one quarter of that in 1900.

Reduction in Communicable and Nutritional Diseases

The State Board of Health, and later the county boards of health, together with better teaching of pediatric and preventive

medicine in the medical schools, have enabled family physicians, pediatricians, and health officers to prevent many diseases and to reduce the death rate. For example, in 1916, when North Carolina implemented the model vital statistics law, 3,577 persons died of tuberculosis, but by 1952 the number had been reduced to 543. Only 3 died of typhoid fever in 1952, in contrast to 702 in 1916. In 1916 there were 410 diphtheria deaths, and only 9 in 1952.

The tuberculin testing of cattle started in 1890, pasteurization of milk was advocated in 1908, the concept of vitamins was introduced in 1906 (though Christopher Columbus brought Seville oranges to this hemisphere in 1492 to prevent scurvy among his sailors, and the American Indians used a decoction of North Carolina pine needles for the same purpose). Now scurvy, rickets and pellagra, thanks to Governor Gardner's home gardens and the Red Cross program, are medical curiosities.

Whooping cough and typhoid vaccines, diphtheria and tetanus toxoids, and smallpox vaccination have almost eliminated those diseases.

This great progress in health in North Carolina was started by Drs. Richard Henry Lewis, Solomon Sampson Satchwell, Thomas Fanning Wood, and Watson S. Rankin, the first full-time health officer for this and any other state, who was appointed in 1909. Dr. Rankin had been professor of pathology at Wake Forest, and has more than fulfilled Dr. William H. Welch's statement that he was a "most capable and efficient young man of much promise." The first full-time county health department was in Guilford in 1912.

One of the great health achievements in North Carolina was the hookworm campaign initiated by Dr. Charles Wardlaw Stiles in

From the Department of Pediatrics, Duke University School of Medicine and Duke Hospital, Durham, North Carolina.

1910 and carried forward by Dr. Rankin, Dr. John A. Ferrell, and others under the direction of Dr. Wickliffe Rose of the Rockefeller Sanitary Commission. One of the by-products which was beneficial to me if not to the state was my appointment as dean of the Duke Medical School. When Mr. Duke added a codicil to his endowment establishing a medical school and hospital, Dr. William P. Few consulted Drs. Rankin and Rose about a dean, and was referred to Dr. Welch, who, probably regarding me as a superfluous assistant dean at The Hopkins, recommended me, and for better or worse, the organization of the Duke Medical School was started in 1927.

The State Laboratory of Hygiene which was established under the leadership of Dr. Clarence A. Shore and ably continued by Dr. John H. Hamilton has been of great value in the treatment and prevention of disease with biologic materials, as well as in the diagnostic field. Sanitary engineering, started by Colonel J. L. Ludlow and the State Board of Public Welfare likewise have made great advances in North Carolina.

The high standard of research in this state is exemplified by the work of Drs. William deB. MacNider, William Allen, William Jenner Wood, and Frederic M. Hanes, to name only a few of the many who have contributed to medical progress in North Carolina.

Medical Education

The history of medical education in North Carolina has been ably described by Drs. J. Howell Way, L. B. McBrayer, and Frederick R. Taylor. There have been at least 10 medical schools in the state: the University of North Carolina at Raleigh and later at Chapel Hill; Edinborough Medical College in Robeson County; Leonard Medical School at Raleigh; North Carolina Medical College at Davidson and Charlotte; Bowman Gray School of Medicine at Wake Forest and later at Winston-Salem; College of Physicians and Surgeons at Arlington; Duke at Durham; the College of Physicians and Surgeons at Wilmington; and two schools at Jamestown, one operated by Dr. Madison Lindsey and another by Dr. Shubel. The Western North Carolina Medical College at Asheville was refused a charter by the State Medical Society.

After the purge of 1910 following the Flexner report, only the two-year schools

at Chapel Hill and Wake Forest remained until Duke opened as a four-year school in 1930. The magnificent contribution of the late Bowman Gray enabled the two-year school at Wake Forest to move to Winston-Salem in 1941 and open as a four-year school. The Legislature appropriated money to convert the excellent two-year school at Chapel Hill into a superb four-year school in 1952, with the Memorial Hospital as one of the best hospitals in the country.

The School of Public Health and the Dental School at Chapel Hill also have greatly aided the health program.

Hospitals and Sanatoria

The growth of hospitals has been an important factor in medical progress in North Carolina. In 1900 there were only 527 general hospital beds in the state. Since 1924, however, starting with the establishment of the Duke Endowment, the funds of which assisted in the building, equipment, and operation of hospitals in North and South Carolina, and with the founding of the North Carolina Medical Care Commission under Governor J. Melvin Broughton and Dr. Clarence Poe, with appropriations by the Legislature and funds provided by the Hill-Burton Bill, the number has increased to more than 10,000. Among these great assets to the state is the Moses Cone Memorial Hospital at Greensboro.

The establishment of tuberculosis sanatoria, started by Dr. J. E. Brooks, the construction of the Orthopedic Hospital at Gastonia under the leadership of Dr. Oscar Miller, the crippled children's school and well-baby clinics distributed throughout the state, the Cerebral Palsy Hospital at Durham, and the early treatment centers for venereal disease, all have greatly contributed to medical progress.

The organization of the Hospital Care Association in Durham in 1933 and of the Hospital Savings Association in Chapel Hill in 1935 have enabled many North Carolinians to have hospital care within their means.

Contributions to Military Medicine

This last half century also has had two world wars, in which the physicians and nurses of North Carolina have more than fulfilled their share of duty. Base Hospital No. 65 was organized in North Carolina by Dr. J. Wesley Long, Frederic M. Hanes, James B. Bullitt, and others, and it saw

service overseas in 1918. In World War II the Sixty-Fifth General Hospital, organized by Duke Medical School with Drs. Elbert L. Persons, C. E. Gardner, Jr., and others, also served overseas. In addition, several hundred physicians and nurses have served in other military units, many of whom gave their lives in these wars.

Further Advances

Perhaps the most spectacular progress has come with the introduction of the sulfonamides, the antibiotics, and other "wonder drugs" during the last 20 years. It is difficult to realize that two-thirds of the drugs now in use were unknown 10 years ago⁽³⁾, and that it was not until 1916 that the late Dr. George M. Cooper, who as the beloved head of the infancy and maternal welfare program of the State Board of Health has done as much as anyone to reduce infant mortality in North Carolina, gave the first dose of salvarsan, the earliest of the wonder drugs, which has now been displaced by penicillin.

The benefit of this amazing progress would not have been available to the people of North Carolina without the unstinting services of all of the members of the medical profession and their county, state, regional, and national organizations, together with the Tri-State Medical Association, the Seaboard Medical Association, the North Carolina Pediatric Society, and the North Carolina Chapter of the American Academy of General Practice.

Through the meetings, publications, and journals of these organizations knowledge was disseminated as fast as it was discovered. The State Medical Society has grown from 515 members in 1901 to 2,673 in 1953. It is interesting that this Society was among the first to admit women to membership, Dr. Susan Dimock being elected in 1872. The oldest of the county medical societies apparently is that of Pitt, organized in 1867.

These advances have been reflected in hospital and office practice. For example in 1930, 7 per cent of the children admitted to Duke Hospital had diphtheria, and 4 per cent were syphilitic. Now diphtheria is a rarity, and a positive serologic test for syphilis is regarded as erroneous until verified. As a result of this progress, there has been a marked shift from the treatment of medical, pediatric, and geriatric patients in hos-

pitals to treatment on an ambulatory basis in offices and clinics. This modern teamwork between doctors, nurses, technicians, social workers, and psychologists is keeping patients well and treating them instead of their diseases⁽⁴⁾.

Conclusion

It is impossible to list all of the physicians and surgeons of the state who have contributed to the advances which have been made. Requests for nominations sent to several men who are familiar with the history of the medical profession of North Carolina of the past half century elicited more than 100 names of those who in a large measure have been responsible for this Golden Age of Medicine⁽⁵⁾.

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INFANTILE CORTICAL HYPEROSTOSIS*†

JAMES B. SIDBURY, M.D.

and

J. BUREN SIDBURY, M.D.

WILMINGTON

Infantile cortical hyperostosis is a disease of infants characterized by the usually sudden onset of swelling of the face, thorax or extremities, hyperirritability, fever, fluctuating course and roentgenographic evidence of periosteal new-bone formation⁽¹⁾. In the past, this disease entity has been considered a rarity, but the occurrence of 10 cases in a single pediatrician's practice would seem to belie this contention.

Incidence and Etiology

We have analyzed 69 cases of infantile cortical hyperostosis, including the 10 cases seen at the Babies Hospital in Wilmington. Age is a decisive factor; in no unquestionable cases did the onset occur later than 5 months of age; the average age at onset

*From the Babies Hospital, Wilmington, North Carolina.

†Aided in part by a grant from the Harkins Medical Foundation.

Table 1
Initial Symptoms in 10 Cases

	No. Cases
Swelling and tenderness over bone.....	5
Hyperirritability	6
Fever	3
Meningismus	1
Pseudoparalysis	1
Persistent "mumps"	2

was 9 weeks. Sex and race were not determinants.

Our interest in the etiology of the disease was stimulated by the occurrence in siblings; onset in both infants was apparently before birth. Van Zeben⁽²⁾ reported 3 cases from Holland, 2 in siblings and the third in a second cousin. Barba and Freriks⁽³⁾ described the disease in siblings; the diagnoses were made antenatally by x-ray examination of the mother. Kitchen⁽⁴⁾ reported the case of a patient with infantile cortical hyperostosis whose mother, by description of symptoms, had also been afflicted in infancy. In the light of these cases it became difficult not to give serious consideration to a genetic etiology. Supportive arguments are found in the familial pattern seen in these infants, the fact that the manifestations have been demonstrated in some cases antenatally, and that the average age of 9 weeks at onset is similar to that of pyloric stenosis, which is thought by many to be an inherited abnormality. The evidence is insufficient for an exact definition of the genetic mechanism.

Symptoms and Diagnosis

There was usually a sudden onset of symptoms in an apparently normal infant. The order of appearance of the clinical triad of fever, irritability, and tumor varied. In 7 of our 10 cases, fever and irritability preceded the appearance of the tumor. Two of our patients had no known fever and two no irritability. The initial symptoms in 10 cases are listed in table 1.

The tumors were invariably found over bone. There was no erythema or warmth and the overlying soft tissue was movable. Table 2 indicates the frequency of bones involved.

The roentgenograms usually add positive evidence to clinical suspicion. X-ray studies show the periosteal new-bone formation along the diaphysis of the bone. Very early lesions may not be apparent. Roentgenographic studies in the late stages of the process may show healing by resorption of bone

Table 2
Incidence of Bones Involved
69 Cases

	Per Cent		Per Cent
Mandible	77	Humerus	32
Tibia	44	Femur	32
Ulna	36	Fibula	18
Clavicle	35	Pelvis	6
Ribs	32	Skull	3

from the medullary cavity, leaving an enlarged bone with a thin cortex and a widened medullary cavity.

Treatment and Prognosis

Eight cases were followed long enough for healing to be evaluated. Clinical signs and symptoms were resolved at an average of 9 months of age. Four of these cases were followed long enough for the roentgenograms to indicate complete healing; an average of 27 months was required.

Previously considered a benign disease, the occurrence of deaths consequent to the disease gives us reason to reconsider the treatment, which heretofore has been symptomatic. There is some evidence that hormonal therapy (ACTH, cortisone)^(3,5,6) mollifies the severity, shortens the course, and may prevent residual bone deformity. Hormonal therapy is indicated in the more severe cases.

Pathology

A search for clues to the pathogenesis of this disease led us naturally to look for the pathologic descriptions of necropsy and biopsy material. In most cases no biopsies were obtained. The most careful studies recorded are those of Sherman and Hellyer⁽⁷⁾ of Chicago. A synthesis of the pathologic findings derived from their studies and the



Fig. 1. Roentgenogram illustrating the marked involvement of the mandible and the extensive soft tissue swelling.

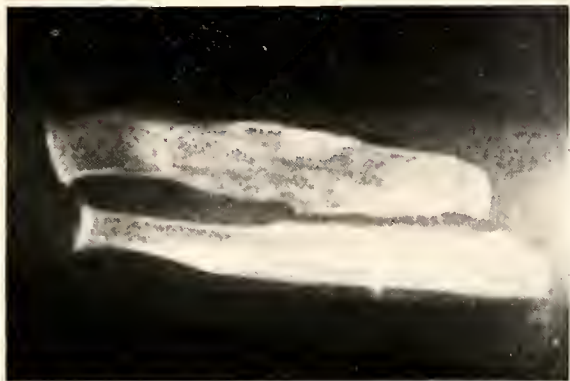


Fig. 2. This film demonstrates extensive involvement of the radius and ulnar.

descriptions of others would indicate that the periosteum is mucinous and thickened, but is stripped easily from a thickened bone of irregular contour. Microscopic examination demonstrated involvement by the pathologic process of the overlying soft tissues, as well as of the bone and periosteum. Fibrous strands were found to extend from the periosteum into the overlying fascia, muscle, and adipose tissue. Evidence of degeneration of the soft tissues over the areas of bone involvement was observed. The arteries of the overlying soft tissue and periosteum showed intimal proliferation. The periosteum was hyperplastic and edematous. In the areas of osseous involvement the haversian pattern was imperfect and the haversian spaces were lined with osteoblasts, and contained poorly vascularized, loose, fibrillary tissue. Never was there evidence of hemorrhage or inflammation.

It seems reasonable that the arterial lesions are primary. The resultant local hypoxia produces edema and hyperplasia of the periosteum, which in turn results in the overproduction of imperfect bone. The lesions are tender and painful consequent to the tension of the periosteum caused by the proliferative process. The fever, leukocytosis, and elevation of the sedimentation rate are due in part to the tissue necrosis. Anemia and lowering of the serum iron is a nonspecific response to a persistent fever from any cause. The initial impetus, the arterial intimal proliferation, we hold to be an inherited defect.

Summary

A description of the clinical manifestations, roentgenologic findings, prognosis and treatment of infantile cortical hyperostosis

is given. It is suggested that the condition is the clinical manifestation of an inherited defect of the arterioles supplying the affected areas. The resulting hypoxia causes focal necrosis of the overlying soft tissues and a proliferative reaction of the periosteum with resultant periosteal new-bone formation.

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ACUTE INFANTILE HEMIPLEGIA

ALANSON HINMAN, M.D.

WINSTON-SALEM

Acute infantile hemiplegia is described as an acute illness, usually without any prodromal symptoms, in which the patient has a sudden convulsive seizure, becomes unconscious, usually vomits, and has a temperature rise to 103 F. or more. Usually the convulsions recur for several hours or longer and the child remains comatose. After the seizures cease, there is a gradual return to consciousness and the hemiplegia becomes evident. In the main, accessory clinical findings are noncontributory.

This syndrome has also been termed polioencephalitis, Marie-Strumpell encephalitis, Strumpell-Leichtenstern encephalitis, and infantile meningoencephalitis. It has been well described by Ford and Schaffer⁽¹⁾, Rothman⁽²⁾, Bridge⁽³⁾, and others.

Presentation of Cases

It is the purpose of this paper to present 29 cases of acute infantile hemiplegia, 11 of which occurred without preceding convulsions and 8 of which had no preceding or concurrent illness whatsoever. A careful search of the available literature has not revealed any previous reports of hemiplegia

Read before the Section on Pediatrics, Medical Society of the State of North Carolina, Pinchurst, May 5, 1954.

From the Pediatric Service of the North Carolina Baptist Hospitals, Inc., and the Department of Pediatrics of the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

Table 1
Summary of Eleven Cases Not Associated with Convulsions

AGE	SEX	NEUROLOGIC HISTORY	PRECEDING ILLNESS	BIRTH WEIGHT	SEQUELAE
3½ years	M	—	—	8' 13"	Partial recovery
15 months	F	—	—	8' 7"	Partial recovery; patient walks with brace
2½ years	M	—	+/- Fall 6 d p.t.a.	8'	Poor recovery
4 years	F	? Father's first cousin had epilepsy	—	7'	Partial recovery, but later developed Jacksonian seizures; Abnormal EEG
13 months	M	—	—	?	Fair; later <i>grand mal</i> seizures
11 months	M	—	—	9' 2¾"	Followed only 1 month; good recovery by then
12 months	M	—	+/- URI	6' 10"	Very poor recovery; <i>grand mal</i> and <i>petit mal</i> seizures
13 months	M	—	—	7' 8"	Fair recovery
3 months	F	—	—	7' 6"	Fair recovery
12 months	M	—	+++ (Pneumonia, acidosis, dehydration, phlebitis)	10' 3"	Good functional recovery
13 months	M	—	+++ (pertussis)	8' 8"	Poor recovery; later had localized, right-sided seizure
Average age: 19.2 months			2 with serious preceding illness	7 more than 1 S. D. Development of birth weight	Development of subsequent seizures in 4

occurring in children without preceding or associated convulsive disorders or other acute infectious diseases.

The patients presented were all seen in the Pediatric Department of the Bowman Gray School of Medicine either at the time of their acute illness or at varying intervals following the onset of the hemiplegia.

Nonconvulsive cases

There were 11 cases of hemiplegia not associated with convulsions.

The average age of onset was 19 months, the earliest case occurring at 3 months and the latest at 4 years. Six cases (54.5 per cent) occurred between 11 and 13 months. There were 8 males and 3 females. In only 1 case (no. 4), (9 per cent) was there any history of neurologic disease in the family; in this case a first cousin of the father's was said to have epilepsy. In 7 of the 11 cases (63.6 per cent) there was absolutely no history of preceding illness or trauma. One child had a mild upper respiratory infection; one had had a fall from the bed six days prior to onset; one had been acutely ill and hospitalized with pneumonia, dehydration and acidosis, and a phlebitis had developed at the site of a cut-down; and in one patient who had had pertussis for two weeks, hemiplegia developed after a paroxysm of coughing.

It is interesting, but probably of no significance, that 7 of the 11 patients (63.6 per cent) were more than 1 Standard Deviation above the median in birth weight.

Four of the 11 patients (36.3 per cent) later had seizures. Only 2 of the 11 (18.1 per cent) were said to have made good recoveries, and 1 of these was followed for only one month after discharge from the hospital.

Convulsive cases

In 18 cases hemiplegia developed following convulsions.

The average age of these patients was 14.4 months. There were 13 females and 5 males. Ten of the 18 (55.5 per cent) had family histories of neurologic disease.

Of this group, 1 died and autopsy showed minimal leptomeningitis (organism undetermined) and focal encephalomalacia in the left fronto-parietal area. Five (27.7 per cent) had apparently complete and early recovery. Convulsive seizures later developed in 7 of the 18 (38.8 per cent). Hemiplegia followed by seizures recurred in 2 of the 18 (11.1 per cent).

It is noteworthy that there was a higher percentage of recovery in this group than in the nonconvulsive group. In both groups the percentage of patients who later had seizures is about the same.

In those patients who had had preceding convulsions, 55.5 per cent showed a family history of neurologic disease. In those patients who had not had preceding convulsions, only 9 per cent had such a family history.

Etiology

The etiology of this syndrome is largely a matter of conjecture. In the absence of as-

sociated illnesses, trauma, or of any other signs or symptoms of infection or disease, it is not feasible to get lost in the arguments for or against localized encephalitis that have been propounded to explain those cases of hemiplegia occurring with fever and convulsions.

Because of the relative permanence of the neurologic deficits in these cases, temporary disturbance in function such as that due to edema, hemorrhage, infection, or anoxia does not seem the likely cause. This same permanence does, however, point to vascular lesions, with resultant destruction of portions of the brain as etiologic agents.

The work of Tuthill⁽⁴⁾ on changes in the elastic layer in the cerebral vessels showed that splitting and destruction of the elastic lamellae with secondary calcification was probably enhanced by infection or other intoxication. Her work was substantiated by Winkelman and Eckel⁽⁵⁾, who also described atheromatous and arteriosclerotic changes associated with or following infections in infants and young children. It was their thesis that any of the changes occurring in the blood vessels in adults can and do occur in those of children, and that their occurrence is enhanced and speeded by the occurrence of acute infections.

Irish⁽⁶⁾ discussed the occurrence of thrombotic and embolic cerebral vascular accidents in children, again emphasizing the relationship of infection to arterial or venous changes.

Ford⁽⁷⁾, in discussing the occurrence of hemiplegia with fever and convulsions, felt that vascular damage is the most likely cause for the hemiplegia.

Needless to say, the number of these cases which reach autopsy is small, and our knowledge of the neuropathologic changes is thereby insufficient. The abrupt onset of symptoms unassociated with other signs of infection or illness, however, so closely parallels that of nonapoplectiform cerebral vascular accidents in adults that it would seem logical, in the light of our present knowledge, to assume a vascular etiology.

It is not within the scope of this paper to discuss the localization of the damage as related to the signs and symptoms. In our series electroencephalograms were done in only a few cases, and were not too helpful. Ventriculograms, when done, were negative,

and other than general localization on the basis of peripheral changes, the actual site of the lesion could not be ascertained with accuracy.

Incidence

From the cases presented it is not possible to draw any significant statistical conclusions, nor is that the intent or purpose of this paper. However, it is possible to discuss several ideas. One is that this syndrome is not as rare as one might feel from the paucity of reports in the literature. Ford and Schaffer⁽¹⁾ reported a series of 200 cases and quoted Osler's report of some 300 cases⁽⁸⁾. Figures are lacking in some of the other studies although many of the authors speak of "frequently seeing" cases of hemiplegia.

Differential Diagnosis

Another point is that this syndrome is frequently confused with others, such as intracranial tumor, brain abscess, encephalitis, poliomyelitis and cerebral palsy. The occurrence would seem to be frequent enough to deserve careful delineation in the literature and to be considered in the differential diagnosis of neurologic disorders in infancy and childhood.

Although the history of the onset is of help in the differential diagnosis—that is, sudden hemiplegia with or without convulsion—a careful work-up, including lumbar puncture, hematologic studies, skull roentgenography, and possibly air encephalography and electroencephalography is of importance.

It would seem feasible, within the limits of our present knowledge of the etiology and course of this syndrome, to say that in the absence of antecedent disease or trauma, hemiplegia occurring with or without convulsion represents the end result of intracranial vascular damage of one type or another; that in reality the convulsive and nonconvulsive forms are merely clinical variants of the same syndrome. This would seem to be borne out in the similarity of the courses that have been seen in the present series of cases.

Treatment and Prognosis

The treatment, after the diagnosis has been established, is essentially supportive. Anticonvulsant therapy must be considered and in all likelihood should be started after the first episode, as there would seem to be

a moderately high rate of recurrence of seizures in these cases.

Prognosis must be guarded. Mental deterioration apparently occurs in a fair proportion of these children. Control of seizures is relatively difficult and at times impossible (Bridge⁽³⁾), and the parents need considerable help and support in understanding and accepting the problem. Even in the absence of convulsive seizures and mental retardation, the orthopedic deformities are in themselves a major difficulty. It is evident that the care and handling of such children could be done better through the coordination of several disciplines. The pediatrician may be the first to see the child and can handle the early acute stage, but consultation with the neurologist and the neurosurgeon may be necessary and should prove helpful in the differential diagnosis.

As convalescence begins, orthopedic and physical therapeutic advice is indicated in the better handling of the contractural deformities that occur.

Finally, counseling and treatment of both parents and child in a child guidance clinic or by a child psychiatrist will do much to aid in the acceptance of the handicaps, and may be quite prophylactic in decreasing the secondary behaviour disturbances that are so often sequelae of crippling.

Case Reports

Cases without preceding convulsions

Case 1: This 3½ year old male was the product of a full term pregnancy and a difficult forceps delivery, the birth weight being 8 pounds, 13 ounces. The family history was negative. The child had congenital nystagmus and strabismus, and his development was retarded. He was enuretic and encopretic prior to the hemiplegia. The patient had rubella and varicella six months before the onset of the hemiplegia. He was walking across the room when he suddenly fell, having complete right hemiplegia and aphonia. The physical examination revealed a large head and a bruit over the right temporal area. A lumbar puncture was negative. Recovery was only partial.

Case 2: This 15 month old infant girl had a negative family history. The delivery was full term and spontaneous; the birth weight was 8 pounds, 7 ounces. Development was normal and there had been no serious illnesses prior to the hemiplegia. The infant was fretful the day of onset, when the right arm and leg suddenly became paralyzed. The physical examination was negative except for slight facial weakness, spastic paralysis of the right arm, and flaccid paralysis of the right leg. A lumbar puncture was negative. There was partial recovery of function.

Case 3: A 2½ year old male, this child was the result of a full term spontaneous delivery, with a birth weight of 8 pounds. The family history was unrevealing. The development was normal, and there

had been no serious illnesses. A tonsillectomy and adenoidectomy had been performed at 1½ years of age. The child fell from the bed six days prior to the sudden onset of complete right-sided hemiplegia with aphonia. Physical examination revealed a slightly large head and flaccid right hemiplegia. The lumbar puncture revealed 14 mononuclear cells, a negative Pandy test, and normal dynamics. Ventriculograms were normal. There was partial recovery of function.

Case 4: The family history of this 4 year old girl revealed that the father's first cousin had epilepsy, type unknown. The gestation was nine months, the delivery spontaneous, and the birth weight 7 pounds. There had been normal development and no serious illnesses. There had been a sudden onset of left hemiplegia without facial involvement and unassociated with any illness. The physical examination was negative. There was partial recovery of function, but the child later developed Jacksonian seizures. The electroencephalogram showed abnormalities in the right temporo-occipital region.

Case 5: After a full term, spontaneous delivery, this 13 month old male infant did not breathe for several minutes. The family history was negative, and there had been no serious illnesses, until the sudden onset of a right hemiplegia. Physical examination revealed complete right hemiplegia. There was fair recovery of function, but the boy later developed *grand mal* seizures, which were partially controlled.

Case 6: This 11 month old male infant resulted from a full term, spontaneous delivery, and weighed 9 pounds, 2¾ ounces at birth. The development had been normal. The family history was negative. There had been no serious illnesses prior to the onset of a left hemiplegia upon awakening. Physical examination revealed a flaccid left arm and leg, and facial weakness. Lumbar puncture revealed 2 mononuclears, 3 polymorphonuclears, and the Pandy showed a slight trace. Bilateral subdural tap was negative. The electroencephalogram revealed possible deep-seated arterial thrombosis on the right. There was fair to good recovery in one month, although there were still signs of weakness. No further follow-up was made.

Case 7: This one year old male child had a birth weight of 6 pounds, 10 ounces. There had been a full-term, forceps delivery. The family history was negative. The development had been normal. The child had a fever and cough at the onset of the hemiplegia, and vomited several times. Physical examination revealed the child to be in the 50 percentile for height and weight. There was flaccid paralysis of the left arm, with spasticity of the left hand and weakness of the left leg. Lumbar puncture was negative. Pneumoencephalograms were normal. The child made a very poor recovery, but was almost able to sit after one year. Four weeks after the hemiplegia, he began to have *grand mal* seizures, which were controlled on medication. There were questionable *petit mal* attacks beginning one year after the hemiplegia.

Case 8: This 13 month old male child had a negative family history. The delivery was full term and spontaneous, the birth weight being 7 pounds, 8 ounces. The development had been slow. There had been no serious illnesses before the sudden onset of complete right hemiplegia. There was questionable mental retardation. Physical examination revealed a complete right hemiplegia. Electroencephalogram revealed paroxysmal activity in the left posterior temporal region with spike and wave. Skull films were negative. The child made a moderate recovery and was able to walk, with help, after six months.

Case 9: This 3 month old female infant, with a

negative family history, was the product of a full-term, spontaneous delivery, and had a birth weight of 7 pounds, 6 ounces. There had been sudden left hemiplegia, before which there had been no serious illnesses. Physical examination at 20 months of age revealed left hemiparesis with spasticity of the left hand. Pneumoencephalograms were negative, as were cerebral angiograms. A fair recovery was made, with the child being able to walk with a limp and use the left hand for steadying.

Case 10: This 1 year old male child had a birth weight of 10 pounds, 3 ounces. The delivery was full term and spontaneous, and the family history was negative. The development had been normal. The child had been treated at home for an upper respiratory infection and thrush. Ten days prior to the hemiplegia, he had a cold and earache. There was a sudden onset of dehydration and acidosis over a 12 to 18 hour period. At the time of admission, the child was in coma and suffering from acidosis, bilateral otitis media, and questionable pneumonia of the left lung base. The acidosis was treated in the hospital, and phlebitis developed at the site of the cutdown. The child continued comatose and then had a left hemiplegia with right facial paralysis. The physical examination revealed right facial and left arm and leg paralysis. A good recovery was made, with some residual weakness.

Case 11: A negative family history was presented in this 13 month old male child. There had been a full term, spontaneous delivery, with a birth weight of 8 pounds, 8 ounces. The development had been normal. The child had pertussis for two weeks, and while in the hospital had a sudden right hemiplegia, with a questionable convulsion or spell of coughing at the onset. The physical examination revealed a right hemiplegia, not involving the face, and questionable mental retardation. The lumbar puncture was negative. An electroencephalogram revealed widespread left cortical damage. The impression was that this child had had a post-pertussis cerebral hemorrhage, with hemiplegia. One year after the onset of the paralysis, he began having generalized and/or right-sided seizures. There was no real improvement in the spasticity after one year.

Cases with preceding convulsions

Case 1: This 15 month old female infant was the product of a full term spontaneous delivery, the birth weight being 7 pounds, 8 ounces. The family history was negative, and there had been no serious illnesses. The development had been normal. Two days prior to admission to the hospital, the child became irritable, had a severe generalized convulsion, then became comatose. The temperature ranged to 106 F. The physical examination revealed a comatose child with a temperature of 102 F. There were right-sided twitchings, spasticity of the upper extremities, and flaccid lower extremities. The lumbar puncture was normal. The child expired on the second hospital day. The postmortem examination revealed leptomeningitis and focal encephalomalacia in the left frontoparietal region.

Case 2: An 11½ month old female, this child was the result of a normal pregnancy and a spontaneous delivery. The birth weight was 8 pounds, 8 ounces. The family history revealed that a paternal uncle had suffered from seizures following a skull fracture. One sister had died with an intestinal obstruction and seizures, and two sisters had had seizures in infancy. This child had an upper respiratory infection with fever, and then suffered a generalized seizure which lasted for one hour, after which she was comatose for four hours. She had been treated with penicillin and sedatives. Four days later she began having frequent seizures and was admitted.

She had had nine seizures in the 8 to 10 hours preceding admission, but she was not comatose. The physical examination revealed a temperature of 100.4 F., nystagmus to the left, and questionable left papilledema. There was right otitis media and a mild right hemiplegia. A lumbar puncture was negative. Skull films were negative. The electroencephalogram revealed widespread left-sided damage with active spike discharge focus. The child made a good recovery in three to four months, but the speech was slow and slurred at the age of 2 years, 10 months. There was no residual weakness.

Case 3: The family history in this 11 month old female revealed that a first cousin of the mother had seizures. The delivery had been full term and spontaneous, and the birth weight was 7 pounds, 8 ounces. The mother had pre-eclampsia. The development had been normal. Three weeks prior to admission, the child had an upper respiratory infection and fever, followed by a mild generalized convulsion. The temperature rose suddenly to 103 F., followed three hours later by a short generalized seizure, and then by a left-sided seizure with left hemiplegia. Physical examination revealed a lethargic child with left hemiplegia and left facial paralysis. The lumbar puncture was negative, as were the skull films. The child had apparently made a complete recovery by the second hospital day. She was completely well one month after discharge, and there was no further follow-up.

Case 4: A nine month old female with a negative family history, this child was the product of a nine month gestation and a spontaneous delivery. The birth weight was 7½ pounds. The development had been normal. Seven days prior to admission, the child had an upper respiratory infection and fever, with a subsequent convulsion. Three days prior to admission, the fever rose to 105 F., the child had three convulsions, and left hemiplegia ensued. Physical examination revealed an alert child with left hemiplegia, the arm being spastic and the leg flaccid. There was questionable viral pneumonia. The electroencephalogram was grossly abnormal, with extensive damage in the right central and parietal area. Lumbar puncture was negative, as were films of the skull and chest. The child was much improved one month later and seemed well two months later. Seven months after discharge from the hospital, physical examination revealed some incoordination on the left. Three years later the child had a slight limp on the left and was having *petit mal* seizures.

Case 5: This 2 year old child was the product of a full term, spontaneous delivery, the birth weight being 11 pounds. A sister had had seizures in infancy and an aunt also suffered from seizures. The development had been normal. A mild upper respiratory infection developed one week prior to admission. There was a sudden onset of generalized jerking, more pronounced on the right, two days prior to admission. Physical examination revealed a spastic right arm and flaccid right leg, with aphasia. Lumbar puncture was negative. At 2½ years of age, the child was readmitted with febrile convulsions. She had *petit mal* seizures until 6½ years of age, at which time they were controlled with phenobarbital. An electroencephalogram made at 4 years of age revealed minor changes on the right side. At 9½ years, there was mild right residual weakness.

Case 6: This 7 month old male infant had a negative family history. The delivery had been full term and spontaneous, and the birth weight was 8 pounds. The development had been normal, and there were no serious illnesses. At 7 months old, the child had a fever and three generalized convulsions, the first lasting one-half hour, the second occurring on the

same day and the third on the next day. The cause of the fever was not determined. Physical examination at 4 years of age revealed a deviation of the tongue to the left and weakness of the left palate. The child was unable to protrude the tongue. There was slight scoliosis to the right and weakness of the left arm and hand, and he could not pronate or supinate. The left leg was weak. There was questionable mental retardation; the child drooled constantly. His speech was poor, and he was unable to use consonants. He was not seen after this examination at 4 years.

Case 7: This 1 year old male was the product of a full-term, spontaneous delivery, the birth weight being 6 pounds. The development had been normal, with no serious illnesses. The mother had had pre-eclampsia with hypertension; and a maternal uncle had convulsions in infancy. At age 1 the child had an ear infection and a right-sided convulsion. Lumbar puncture done during hospitalization was negative except for 12 cells. Physical examination was negative except for right hemiparesis, right athetosis, and impaired speech. The head turned to the left and the eyes deviated to the left and upward. A skull film was negative. He was treated with antibiotics. After the child returned home, the hemiplegia and aphonia lasted from three to four weeks. At 4 years of age, having been essentially well in the years between, he had an episode of fever, lethargy and vomiting, and a recurrence of right hemiplegia with right-sided seizures in status epilepticus. A pneumoencephalogram showed slight cortical atrophy on the left. An electroencephalogram revealed an abnormal area to the left, and the temporal region showed a large abnormal area. Return of good motor function occurred in one to two months. Eight months later the child was well and had no further seizures while on therapy.

Case 8: This 11 month old female was the product of a full-term, spontaneous delivery who weighed 7 pounds, 8 ounces at birth. There was normal development. There were no serious illnesses except for severe diarrhea at 3 months. Family history revealed that the maternal great-grandmother had had seizures in infancy, and that a maternal great uncle was also thought to have had seizures in infancy. Two days prior to admission at another hospital the infant had fever associated with upper respiratory infection and some diarrhea. She had had a febrile convulsion, right-sided, prior to the onset of this illness. The day before admission she had many right-sided seizures and a right hemiplegia. Results of a physical examination done at that hospital were not recorded here, but lumbar punctures were negative. The child had mild right hemiparesis. She remained well until 17 months of age, when she began to have fever with right-sided convulsions and recurrence of the hemiplegia. Lumbar puncture was negative. Skull films were negative. An electroencephalogram revealed a left-sided focal lesion suggestive of cortical scarring. She continued to have infrequent seizures in spite of therapy. She continued to have right-sided weakness. She was left-handed.

Case 9: This 16 month old female was the product of a full-term, spontaneous delivery, and weighed 5 pounds at birth. Family history revealed that one brother and one sister had had febrile convulsions in infancy. She developed normally. At 13 months she had fallen down 22 steps, striking her head in the right frontoparietal region. There were no other serious illnesses. At 16 months she had high fever, pneumonia, and convulsions with left hemiplegia. On physical examination her temperature was 105 F.; she was comatose, with left hemiplegia and pneumonia. She recovered and at 26 months of age had a second convulsion. There was a third convul-

sion at the age of 9 years. Physical examination at this time revealed skull roentgenograms to be normal. An electroencephalogram showed an extensive right-sided lesion. Cerebral arteriograms showed questionable hemangioma of the right cerebral hemisphere, but were not satisfactory. She did not return for follow-up studies.

Case 10: This 21 month old female was the product of a full-term, spontaneous delivery. Family history revealed that the paternal grandmother, father, and one brother had café-au-lait spots. There was a history of slightly slow development. At 21 months she had an afebrile right-sided convulsion which lasted for four hours resulting in right hemiplegia and residual right hemiparesis and speech defect. Physical examination done when the girl was 12 years old revealed café-au-lait spots mostly on the right. There was a question of right facial weakness. At this time the diagnosis was neurofibromatosis, but no definite connection with convulsion or hemiparesis was made. The patient's intelligence quotient was 92. Follow-up over the next two years showed no great change in her neurologic status.

Case 11: This 1 year old female infant weighing 8 pounds, 14 ounces at birth, was the product of a full-term, forceps delivery. Family history was negative. There had been no serious illnesses, and the child had developed normally. Five days prior to admission she had a convulsion. In the hospital she had a left-sided Jacksonian seizure with resultant hemiplegia. There was also a diagnosis of pneumonitis. Physical examination showed left hemiplegia with nuchal rigidity. Lumbar puncture was bloody, but it was felt that this was traumatic. There was no follow-up.

Case 12: This 2½ year old male child was the product of a full-term, spontaneous delivery, and weighed 8 pounds, 10 ounces. Family history revealed that a paternal aunt had had "spells" from infancy to 6 years of age, and none since that age. No serious illnesses had preceded the present illness. The child was asleep in her father's lap when she had a sudden right-sided seizure lasting 1½ hours. Physical examination revealed a right hemiplegia. Lumbar puncture was negative, as were electroencephalograms and roentgenograms. There was spontaneous recovery by the second hospital day. There was no follow-up.

Case 13: This 9 month old male was the product of an eight months' pregnancy and weighed 6 pounds, 14 ounces at birth. There was a history of slow development. Family history was negative. Prior illnesses included diarrhea, vomiting, fever, and dehydration. One week prior to admission the child had an upper respiratory infection; three days prior to admission he had diarrhea. There was dehydration and anemia on admission. Three days after admission 24 hours of general convulsion was followed by left hemiplegia. Physical examination showed a dehydrated, pale infant whose right arm and leg were spastic and whose left arm and leg were flaccid. Lumbar punctures twice were bloody, then showed elevated pressure and a few cells. Subdural taps and roentgenograms were negative. There was no follow-up.

Case 14: This 16 month old female was the product of a full-term, spontaneous delivery, weighing 6 pounds, 5 ounces. She had developed normally. Family history revealed that the father had had febrile seizures up to 2 years of age; one sister and one cousin had febrile convulsions. This child had had febrile convulsions at 4, 6, 9, 12, and 14 months of age. On the day prior to admission she had had a 2½-hour generalized seizure, followed by a right-sided seizure and right hemiplegia. Physical examination showed right hemiplegia and questionable

left facial weakness. Roentgenograms and lumbar punctures were negative. There was spontaneous recovery of motion by the third hospital day. The child was discharged on phenobarbital and had no residual weakness.

Case 15: This 2 year old female child was the product of a full-term, spontaneous delivery, and weighed 6 pounds, 2 ounces at birth. She had developed normally. Family history was negative. She had had febrile convulsions at 8 and 18 months of age. At 2 years of age she had a prolonged febrile seizure followed by right hemiplegia. The child was seen at this hospital at the age of 10 years for an anticonvulsant work-up. Physical examination at that time revealed right temporal hemianopia, and right facial, right arm and right leg paresis. An electroencephalogram showed extensive damage in the left frontal area. A pneumoencephalogram showed atrophy of the left cerebral hemisphere. The diagnosis was convulsions of the *petit mal* and *grand mal* type, which were hard to control. There was no real change in the hemiparesis.

Case 16: This 6 month old female was the product of a full-term, spontaneous delivery, and weighed 7 pounds, 14 ounces at birth. There was normal development. Family history was negative. There was no previous serious illness except when she had a febrile convulsion at 6 months, with transient right hemiplegia lasting for three weeks. At 14 months she had a left-sided seizure and left hemiplegia. Physical examination revealed left hemiplegia and facial weakness. Lumbar puncture, skull, and cervical spine films were negative. Three months later there was fairly complete recovery except for leg weakness. There was a question of *petit mal* seizures 6 months later. There was no follow-up.

Case 17: This 16 month old female was the product of a full-term, spontaneous delivery, and weighed 9 pounds, 4½ ounces at birth. Family history was negative. Development was normal. At 16 months she had a right-sided febrile convulsion which lasted for four hours, with residual right hemiplegia. Physical examination was negative except for right-sided clonic convulsions and right hemiplegia. The former were controlled with Pentothal given intravenously. Lumbar puncture was negative. There was complete clearing by the fifth hospital day.

Case 18: This 11 month old male was the product of a full-term, spontaneous delivery, weighing 6 pounds, 11 ounces. Family history revealed that the paternal grandmother had *grand mal* seizures. Development was normal. This 11 month old child had had 6 afebrile seizures starting at 6 months of age. The last one was followed by hemiplegia from which she partially recovered. Physical examination showed paresis of the right arm and leg. Electroencephalogram revealed a left-sided lesion, type undetermined. There was no follow-up.

Summary and Conclusions

1. The syndrome of acute infantile hemiplegia has been described.

2. Eleven cases are presented which do not fit this description and yet constitute acute infantile hemiplegia.

3. Eighteen cases that do fit this description of the syndrome are presented.

4. The theories of etiology are briefly discussed. It is suggested that the most likely cause for the unexplained onset of hemiplegia in infants and young children is a

vascular accident of some type, either embolic, thrombotic or hemorrhagic, following rupture of a vessel wall. Infection is thought to play a role in producing damage to cerebral vessels, as well as those in other parts of the body.

5. The convulsive and nonconvulsive forms of acute infantile hemiplegia are felt to be variants of the same syndrome.

6. It is felt that presenting this small series of cases will be of some help in distinguishing the condition from paralyses and spasticities resulting from other causes such as acute poliomyelitis, encephalitis, and cerebral dysgenesis.

7. A holistic approach, with coordination of the pediatric, neurologic, orthopedic, physical therapeutic, and child psychiatric disciplines, is suggested in the handling of children who have had acute infantile hemiplegia.

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HYDATIDIFORM MOLE AND TOXEMIA OF PREGNANCY

JAMES A. CROWELL, M.D., F.A.C.S.

CHARLOTTE

The recent medical literature has contained frequent studies showing the relationship of hydatidiform mole to chorionepithelioma. There has been very little discussion, however, of the more frequent and occasionally serious toxemia of pregnancy which is sometimes associated with hydatidiform mole.

Chesley, Cosgrove and Preece⁽¹⁾, in an extensive survey of the world literature, collected 35 cases of probable or alleged eclamp-

From the Department of Obstetrics and Gynecology, Charlotte Memorial Hospital, and The Nalle Clinic, Charlotte.

sia occurring in conjunction with hydatidiform mole. To this they added 1 case of their own. Five of the 36 patients died, a mortality of 14 per cent. Mueller and Lapp⁽²⁾ reported a case of hydatidiform mole, followed by postpartum eclampsia and chorionepithelioma, with recovery. Pigeaud⁽³⁾ reported a case of eclampsia developing in the early stages of hydatidiform mole at four months gestation, with eventual recovery.

I have recently treated a case of severe toxemia in a patient with an early pregnancy associated with hydatidiform mole. A complete report of the case is presented.

Case Report

A 26 year old white woman, para 0, gravida II, whose last menstrual period was February 19, 1953, gave a history of a seven months' pregnancy terminating in a premature stillborn delivery in 1950. She was transferred from the care of her local doctor to that of another doctor, and was admitted to Mercy Hospital on June 20, 1953. She stated that she had been well until one week previously, when a low grade, headache developed, and her legs and eyelids began to swell. On admission she had pre-tibial edema. The blood pressure was 160 systolic, 100 diastolic. The abdomen was enlarged to the size of a four and a half months' pregnancy. The urinalysis revealed a 3 plus albuminuria. She had felt fetal movement two weeks previously. During the next six days she received the usual medical treatment for toxemia. During this time the blood pressure ranged from 130 to 170 systolic over 70 to 110 diastolic. The urine showed a 1 to 4 plus albumin, with many finely granular and hyaline casts. The red blood cell count was 3,080,000 and hemoglobin 64 per cent. The nonprotein nitrogen was 32 mg. per 100 cc. She was discharged from the Mercy Hospital on June 25, 1953. She was then followed for a short time as an ambulatory patient, and her doctor recommended that the pregnancy be interrupted. The patient could feel fetal movement and was extremely anxious to continue the pregnancy; so she refused the interruption of the pregnancy and engaged a different doctor. She was followed only for about two weeks by this third doctor when he referred her to my care.

I first saw this patient on July 23, 1953, at which time she weighed 134 pounds. The blood pressure was 125 systolic, 85 diastolic. The size of the fundus indicated a five and a half months' pregnancy, with the fetal heart in the left lower quadrant. There was slight pitting edema of the feet and ankles, and the urinalysis showed a 2 plus albumin. On July 30, 1953, the weight was 141 pounds. The blood pressure was 120 systolic, 75 diastolic, and the urinalysis revealed a 2 plus albumin. On August 6, 1953, the patient's weight was 144 pounds, blood pressure 126 systolic, 78 diastolic, and there was a 3 plus albuminuria. She was admitted to Charlotte Memorial Hospital on August 6, 1953.

During the next seven days she had a complete medical work-up and treatment for toxemia. The blood pressure ranged from 130 to 170 systolic, over 75 to 100 diastolic. The catheterized urine showed from 1 to 2 plus albuminuria, with granular and hyaline casts. The phenolsulfonthalein on August 7, 1953, was as follows: first specimen, 35 per cent; second specimen, 15 per cent; third specimen, 6 per cent; fourth specimen, 3 per cent; total, 59 per cent. On August 7, the urea nitrogen was 10 mg. per 100 cc., and the uric acid 7.0 mg. On August 8, the total

protein was 4.5 Gm. per 100 cc., albumin 2.9, globulin 1.6. On August 10, the blood uric acid was 6.1 mg., and on August 13 it was 5.8 mg. An intravenous pyelogram on August 8 showed "a single fetus in breech presentation. The fetus is developed to about four to five months' duration. The uterus seems larger than it ought to be for the size of the fetus. The dye appears promptly and in good concentration on both sides. Impression: (1) Hydramnios, (2) physiologic dilatation of the right kidney."

The patient again refused an interruption of the pregnancy, and was discharged on August 13, 1953. She was readmitted to the Charlotte Memorial Hospital on August 18 in active labor, following a moderate spontaneous hemorrhage at home. Labor progressed rapidly. The membranes ruptured spontaneously, and there was evidence of polyhydramnios. She was delivered by assisted breech extraction of an abnormal female child weighing 1 pound, 4 ounces. The placenta had to be partially removed manually, and was extremely large, with evidence of typical hydatidiform mole formation over approximately three fourths of its area. Following this procedure, the interior of the uterus was carefully explored and all fragments were removed. Pathologic examination showed typical hydatidiform mole formation over the majority of the placenta, and an abnormal female child with spina bifida. The patient made an uneventful convalescence. The blood pressure remained within normal limits. The urine showed a 1 plus albumin. On August 18, 1953, the blood uric acid was 7.5 mg. per 100 cc. She received one blood transfusion while in the hospital, and was discharged on August 23, 1953. She has since been followed in the office and has returned to good health. The blood pressure and the urinalysis are entirely normal.

Analysis of 15 Cases of Hydatidiform Mole

From 1942 to 1953 we have had 15 cases of hydatidiform mole at Charlotte Memorial Hospital. An analysis of these cases is shown in tables 1 and 2.

Frequency

The incidence of hydatidiform mole has been reported as occurring once in approximately 1,500 gestations. Chesley and others⁽¹⁾ reported 1 to 1,321 deliveries at the Margaret Hague Maternity Hospital, and Mueller and Lapp⁽²⁾ reported an incidence of 1 to 1,349 pregnancies at King's County Hospital, Brooklyn, New York. Our incidence was 1 to 759 deliveries at the Charlotte Memorial Hospital.

Pathology

Characteristically, a hydatidiform mole consists of many small, grape-like vesicles, which have developed instead of a normal placenta and fetus. While pathologists are not in complete agreement, a hydatidiform mole is generally considered to be a true neoplasm of the chorionic epithelium⁽⁴⁾, with enlargement of the chorionic villi. Secondary cystic changes take place in the stroma. The three microscopic pathologic changes which characterize hydatidiform mole are: (1) tro-

Table 1

Analysis of Fifteen Cases of Hydatidiform Mole
1942-1953

Age of patients 19-43 yrs.	Average age 28.5 yrs.	
Parity	No. Cases	Per Cent
1st pregnancy	6	40.0
2nd pregnancy)	3	20.0)
3rd pregnancy) Multiparous	5	33.3) 60%
4th pregnancy)	1	6.7)
Abnormal bleeding	15	100
Secondary anemia	10	66.6
Size of uterus larger than expected	5	33.3
Size of uterus smaller than expected	1	6.7
Excessive weight gain	2	13.3
Toxemia of pregnancy	4	26.7
Associated ovarian cyst (one large lutein cyst removed surgically)	3	20.0
X-ray evidence of hydatidiform mole	4	26.7
Biological pregnancy test used in diagnosis	2	13.3

phoblastic proliferation; (2) hydropic degeneration of the villous stroma; and (3) scantiness of blood vessels⁽⁶⁾. Malignant changes are possible but uncommon. The fear of malignant change is largely unjustified⁽⁴⁾. In this study of 15 cases seen during the period of 1942 through 1953, only one case showed malignant tendencies. After careful studies the diagnosis of that one case was changed from chorionepithelioma to that of chorioadenoma destruens⁽⁵⁾, which constitutes the intermediate group between the benign hydatidiform mole and the chorionepithelioma malignum.

Cystic enlargement of the ovaries associated with hydatidiform mole has been recognized for many years. The changes are that of multiple lutein cysts of the ovary, and occasionally a cyst may become large enough to require surgical removal, as in one case in this series. A total of 3 patients, or 20 per cent, showed cystic enlargement of the ovaries, but it is possible that a larger number went unrecognized. There will be spontaneous retrogression and disappearance of the ovarian lesion, as a rule, after the removal of the hydatidiform mole or chorionepithelioma.

Symptoms and diagnosis

All 15 patients in this series gave a history of vaginal bleeding, usually vaginal spotting and a persistent brownish discharge. A tentative diagnosis of threatened abortion was

Table 2

Termination and Follow-Up

Termination of Hydatidiform Mole	No. Cases	Per Cent
A. Spontaneous abortion and dilatation and evacuation	10	66.6
B. Induced abortion and dilatation and evacuation	1	6.7
C. Abdominal hysterotomy	3	20.0
D. Spontaneous delivery (assisted breech)	1	6.7
Follow-Up		
A. Normal puerperium	6	40.0
B. Normal puerperium, requiring one or more blood transfusions	8	53.3
C. Chorionepithelioma — diagnosis later changed to chorioadenoma destruens. (alive and well 7 years following total hysterectomy, bilateral salpingo-oophorectomy and partial cystectomy, followed by deep x-ray therapy).	1	6.7
D. Subsequent pregnancy and delivery of normal child	7	46.7

made most frequently. Careful examination of the material passed will sometimes reveal the grapelike cyst, and the diagnosis can be suspected.

The quantitative pregnancy test may be of aid in the early diagnosis of hydatidiform mole. It is of much greater aid in the follow-up studies. One must bear in mind that with high gonadotrophic hormone production at about three months gestation in a multiple pregnancy, as little as 0.05 milliliters of urine may give a positive test⁽⁴⁾. Also, a positive test following a negative test in the follow-up studies may indicate a new normal pregnancy.

The size of the uterus may help in the diagnosis; however, it may also be misleading. It was larger than expected in only one third of the cases.

Early toxemia occurred in 4 cases, or 26.7 per cent of the series. Severe toxemia was present in 3 cases. Since toxemia of pregnancy is a condition of late pregnancy, toxic symptoms (hypertension, proteinuria, edema, and so forth) occurring in the earlier months are suggestive of hydatidiform mole⁽¹⁾.

Wellen reported an incidence of 3.7 per cent of specific hypertensive disease of pregnancy as pre-eclampsia and eclampsia, in a 15 year study of 27,028 deliveries at Bellevue Hospital⁽⁷⁾. Only 32 cases were reported to have their onset prior to 30 weeks' gestation, giving an incidence of 0.12 per cent.

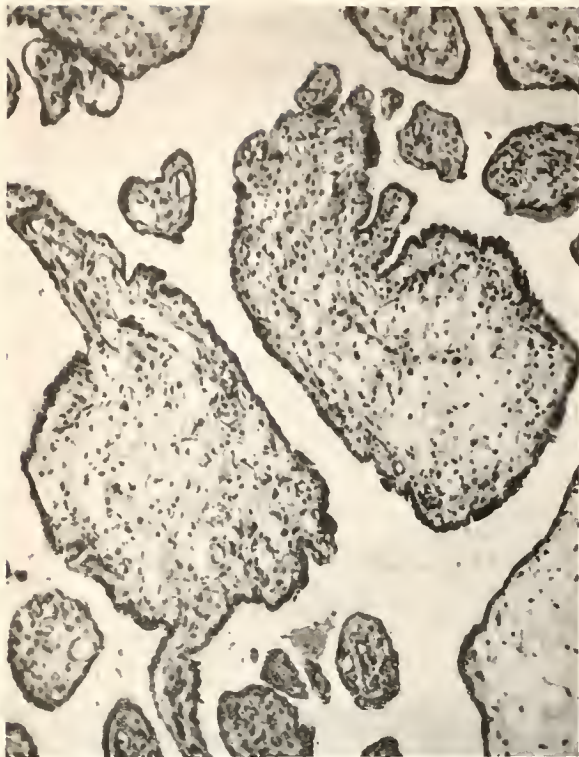


Fig. 1. Normal placenta.

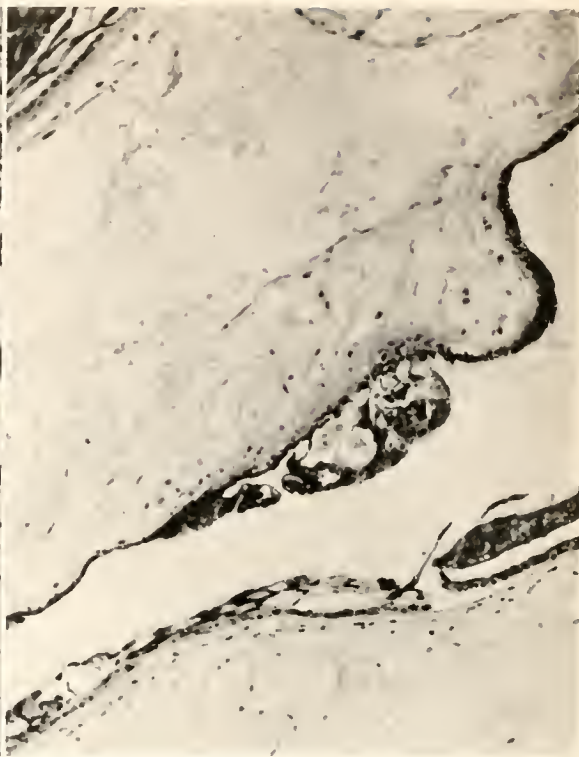


Fig. 2. Hydatidiform mole.

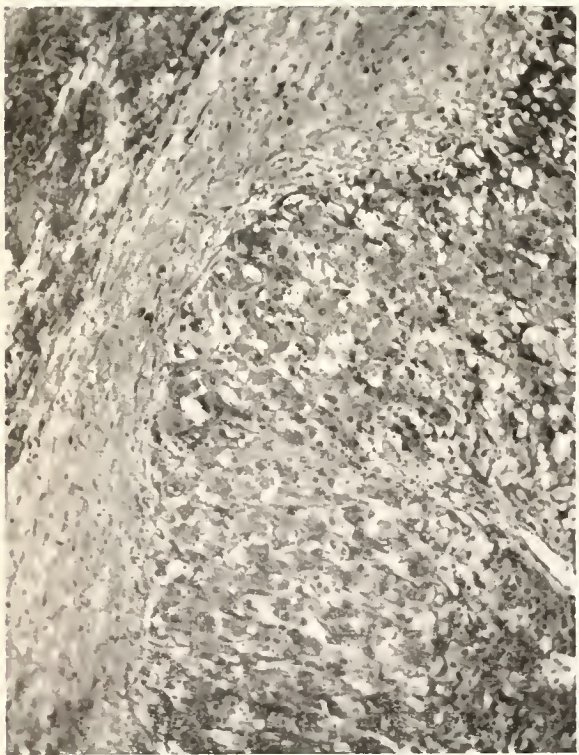


Fig. 3. Corpus luteum hemorrhagicum of the ovary.



Fig. 4. Lutein cyst of the ovary.



Fig. 5. High power magnification of lutein cyst.

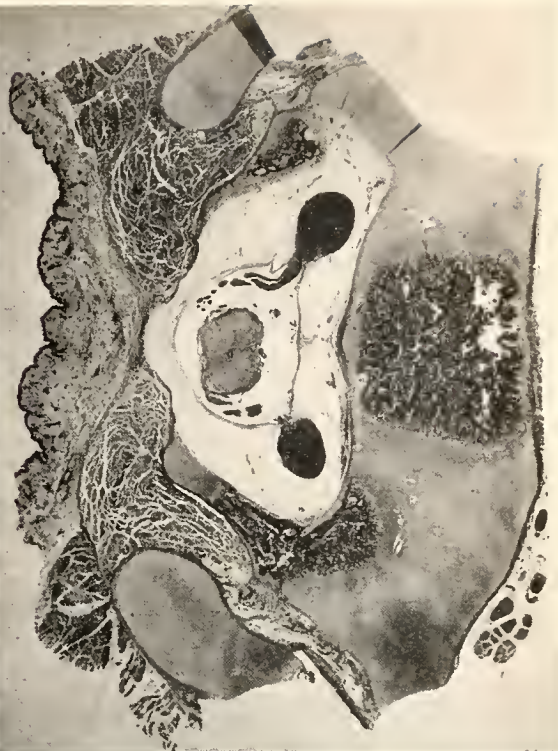


Fig. 6. Cross section of fetus.



Fig. 7. Roentgenogram showing gravid uterus that is much larger than would be indicated by the size of the fetus. Hydatidiform mole and hydramnios.

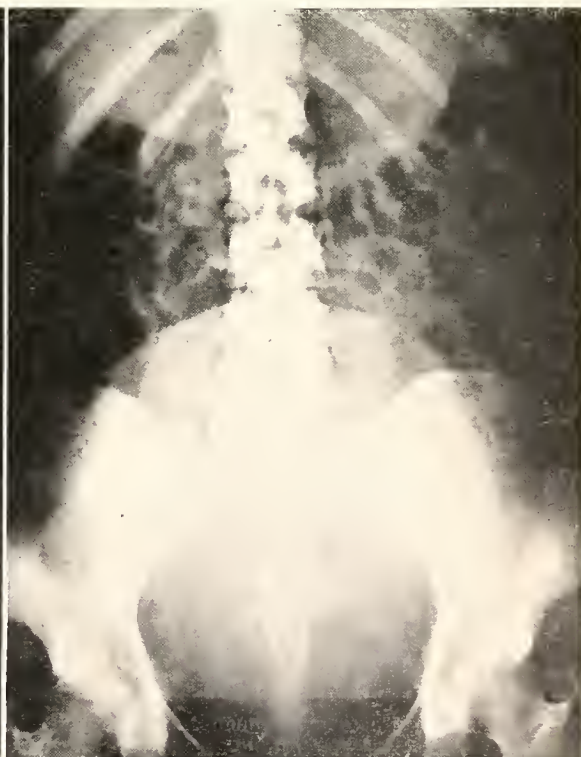


Fig. 8. Roentgenogram showing gravid uterus of normal size for six months' gestation. No fetal parts are seen.

If this figure is compared to the 26.7 per cent of early toxemia occurring in association with hydatidiform mole, it will show that in any case of toxemia of pregnancy in the early months, the possibility of hydatidiform mole should be investigated. Beck⁽⁸⁾ has stated that when pre-eclampsia or eclampsia is encountered early in gestation, it is usually a complication of hydatidiform mole.

Roentgenologic evidence of hydatidiform mole was present in 4 cases, or 26.7 per cent. This examination can prove very helpful when it shows no evidence of fetal parts in a patient of five or six months' gestation.

Treatment

Ten patients, or 66.6 per cent, were treated by spontaneous abortion followed by dilatation and curettage. Three patients were treated by abdominal hysterotomy. In all 3 cases the uterus was larger than would be expected for a four and a half months' pregnancy. One patient had a massive vaginal hemorrhage which required an immediate abdominal hysterotomy. If the uterus has enlarged to more than normal for 12 weeks' gestation and the cervix is closed, and if there has not been a spontaneous evacuation of its contents, an abdominal hysterotomy is the treatment of choice. Shumann⁽⁹⁾ and Hill⁽¹⁰⁾ have pointed out some of the advantages of this approach: (1) complete removal of the whole mole is possible under direct vision; (2) macroscopic evidence of invasion of the myometrium is available, allowing immediate hysterectomy if indicated; (3) accidental perforation of the uterus is eliminated; (4) hemorrhage is controllable.

Follow-up

The follow-up showed that 6 patients had a normal puerperium, and that 8 of the 15 had a normal puerperium requiring one or more blood transfusions to correct the secondary anemia. Seven patients have subsequently become pregnant and have given birth to normal children. There has been no mortality in the 15 cases reported. One patient who had chorioadenoma destruens is alive and well seven years after surgical treatment and deep roentgen therapy.

Summary

A case of severe toxemia in early pregnancy with hydatidiform mole has been re-

ported. Fifteen cases of hydatidiform mole have been reviewed and analyzed.

All patients have been followed, and there have been no maternal deaths.

Toxemia of pregnancy occurred in 4 cases, or 26.7 per cent of this series.

The author is grateful to Dr. Frank Watson of the Department of Pathology, Charlotte Memorial Hospital, for preparing the microphotographs used in this paper.

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Abstract of Discussion

Dr. Robert N. Creadick (Durham): Dr. Crowell's case report presents several interesting features. Regarding the care of the patient, it is deplorable that she was treated for only five days and then discharged from the hospital. This was in June, 1953. Apparently the recommendation of interruption of pregnancy was entertained, but the patient refused. It would be vitally important with such a patient to establish some sort of base-line as to the amount of renal damage present. A history of pyelonephritis would be expected from the report. There is no mention of the eyegrounds at this time. She had been seen by three or four doctors before she came to Dr. Crowell in July, 1953. He quite properly had her hospitalized. The patient again refused interruption of the pregnancy, and about a month later went into premature labor, presenting the placenta, with typical hydatidiform mole occupying three-fourths of its area.

It would be valuable to have some idea of what the blood pressure was in 1950 when she was delivered of the premature stillborn infant. Probably the outcome of the pregnancy actually protected this woman from further kidney damage, or perhaps even permanent residual hypertension. It would seem wise from a medical standpoint even now to evaluate this patient's vasculorenal status by quantitative albumin studies and careful examination of a highly concentrated acid urine specimen. It would not be surprising if there were still some evidence of kidney impairment.

In any discussion of toxemia of pregnancy occurring before the third trimester, careful investigation is necessary because of nephritis or pre-existing hypertension, according to McElin, Faber, and Randall. Dr. Crowell has pointed out that one might expect the uterus to be much larger than is consistent with the duration of the pregnancy. This has not been borne out by a survey of the literature. In

fact, in one series more than 20 per cent of uteri were smaller than was expected. Careful study has been going on for several years on the Pacific coast, principally under the initiation of the late Dr. Albert Mathier and continued by Holman and Schirmer. They found toxemia in only 2 per cent of their patients, but Page reported 71 per cent after the fourth month. We are indebted to Arthur Hertig for his careful study of 1,000 spontaneously aborted ova, in which 40 per cent showed molar changes. In the West Coast series, fetuses were found in association with moles only five times.

In regard to treatment, we at Duke do not feel that hysterectomy is indicated, even if a suspicion of chorionepithelioma is entertained. Nor do we think there is any indication for oophorectomy, even in the presence of associated lutein cysts. Quantitative studies of the pregnancy reaction should certainly be carried out for at least four to six months after passage of a mole. In our experience no valuable information or prediction may be made purely on the basis of spinal fluid pregnancy tests, whether positive or negative. Prevention of a superimposed pregnancy when a patient has once passed a mole is most certainly advisable, and the patient should be so instructed.

I would like to ask Dr. Crowell his interpretation of the three blood pressure readings within normal range, from July to August 6, 1953, prior to his patient's rehospitalization. We have recently discussed this phenomenon with our internist, who says it is an ill omen.

Dr. C. W. Brown (Charlotte): This case is more interesting to me than to the other members of this group, since I happen to be the one who attended the patient during her first hospitalization. I feel compelled to defend myself with regard to Dr. Creadick's criticism of the five-day hospitalization. I would like to explain that the case is primarily a problem in socio-economic relations. The patient was seen on the first of June. The abortion did not occur until the last of August. For three months she had been treated for severe toxemia. She belonged to a fanatical religious sect, and I knew that it would be impossible to keep her in the hospital more than a few days. In fact, she wanted to go home the next day.

After due consultation with the members of our group, it was decided that this patient needed a hysterotomy. Since she happened to be in a Catholic hospital, we made arrangements to transfer her to another hospital for this procedure. She and her husband refused this recommendation. She then went to another doctor who tried for some time to get her blood pressure down before Dr. Crowell saw her. He knew she had been in fairly competent hands and that a hysterotomy had been recommended. Only then, and through luck, did she get into the hands of Dr. Crowell and obtain the proper treatment. These hospitalizations and consultations with different doctors must have cost the patient heavily. If we could treat patients like selling automobiles or measuring cloth over the counter, it would be a different story.

Dr. A. L. DeCamp (Charlotte): I want to suggest the possibility of this patient's having had a twin pregnancy. I once treated a patient who had mild toxemia. After eight months of pregnancy she went into labor and gave birth to a living pliable, healthy infant. The placenta was half a hydatidiform mole and half a normal placenta. A twin pregnancy might have been the explanation. There would be no way of determining the truth now.

I also want to comment on the infrequency with which these moles undergo malignant degeneration. In the last two years, I had a patient who was hospitalized for more than five days and who finally presented a mole. Subsequently symptoms developed

in her chest, and she had an x-ray diagnosis of chorionepithelioma metastasis to the lungs. Her family was prepared for her early demise. Through nothing that I nor the medical men did, she recovered, and the condition cleared up. Eventually she began to menstruate, and is now apparently in the midst of a normal pregnancy.

Dr. W. Z. Bradford: In 1942 we presented 2 cases of hydatidiform mole at the South Atlantic meeting in Greensboro. One of the patients had marked toxemia. She was in the fourth month of pregnancy. Another had chorionepithelioma. Hysterotomy disclosed that this patient had a virtually complete penetration of the uterine wall. She had lutein cyst the size of a grapefruit. I doubt that removal of the cyst is hardly ever necessary, since after the mole is cured or removed, the cysts will regress.

In spite of the penetration of uterine wall, the patient subsequently had three children. Ten of the cases in Dr. Crowell's series were early spontaneous abortions. The incidence of toxemia associated with hydatidiform moles was listed at 26 per cent. If the moles were of three or four months' duration, the incidence of toxemia would probably be 66 instead of 26 per cent.

The question of malignancy is tremendously interesting and baffling. In the 16 cases, there was no malignancy. This is quite fortunate, since the literature reports its incidence as ranging from 2 to 16 per cent. Of course the series is too small to be statistically significant.

The patient with chorioadenoma destruens aborted and presented molar tissue in the past products of conception. A follow-up examination disclosed a mass in the pelvis, hard and rapidly growing. On operation, which lasted for four hours, molar tissue was removed from around the right urether, half the bladder and the tubes, and the ovary were removed. The patient lived, and the diagnosis of chorionepithelioma was changed to that of invasive mole.

Nutrition and Food. Formerly our food habits were the result of tradition, of racial and personal tastes and, in national crises, of force majeure. Our new knowledge leaves the diet to many of us more or less unchanged, because we can get so much, and such varied, food that the nutritionists' ideal—a "balanced diet"—is amply preserved. But to many others, and specially when some important foods are in short supply, the new knowledge is very helpful, that is, if we have the sense to acquire it.—Horder, L.: *Fifty Years of Medicine*, New York, Philosophical Library, 1954, p. 23.

Furacin Brings Symptomatic Improvement

In a report on approximately 400 cases of urethritis treated with Furacin urethral suppositories, Dr. Vernon H. Youngblood, Cabarrus Memorial Hospital, Concord, North Carolina, noted symptomatic improvement "as early as 1 day after beginning treatment." He added that "the average period of treatment is 13 days." His results are reported in the *Journal of Urology* (70:926 (Dec.) 1953).

Dr. Youngblood found that the use of Furacin suppositories "requires a minimum of office visits, does away with the pain of urethral dilatations and silver nitrate applications . . . The patient can easily use the medication at home herself."

The suppositories contain Furacin 0.2 per cent with the topical anesthetic dipiperodon hydrochloride 2 per cent in a water dispersible base.

OBSTETRIC ANALGESIA AND ANESTHESIA

RICHARD L. PEARSE, M.D.

ELEANOR B. EASLEY, M.D.

and

KENNETH A. PODGER, M.D.

DURHAM

This paper is an attempt to present the development of our views concerning the relief of the discomfort and anxieties of childbirth. There are two definite and distinct phases in this development. From 1946, when our group had its start, our aim was to give the majority of our patients a complete amnesia once labor was well established. A few hardy souls demanded caudal anesthesia. We used a fair amount of general anesthesia, but more and more embraced conduction block anesthesia to avoid fetal anoxia. When a third partner joined us in July, 1949, the second phase started and has continued up to the present. He was an advocate of natural childbirth. By his enthusiasm and success he made the conservative and somewhat complacent members of the group aware of the real advantages of giving pregnant women some insight into their condition and of providing maximal emotional support and reassurance during labor. We all agreed on the advantages of conduction block anesthesia, and have rarely employed general anesthesia during the second phase. We feel that women of every social stratum respond to being treated as rational beings rather than as children. We also feel that no methods of analgesia or anesthesia which interfere with the actual physiology of labor should be used. The era of "twilight sleep" and its modifications was the result of fallacious reasoning, and has been a curse. The obstetrician's objective should be to deliver a healthy baby to an undamaged mother. The substitution of other objectives, such as the production of amnesia, is bad.

Materials and Method

This study covers two three-and-a-half-year periods. The first—from January, 1946, to June, 1949—was the epoch of heavy sedation during labor, and some general anesthesia. The second—from July 1949 to

1952—was the period of insight and emotional support, and almost exclusive use of conduction block anesthesia. Only private patients who had received prenatal care are included. Emergency consultations and manipulations done by other practitioners are excluded. The term "primigravida" is used in reference to women whose genital tract was unmodified by previous pregnancy; "multigravida" to those whose genital tract was modified by a pregnancy of any sort or state of development. We mention these details not to be arbitrary, but merely to report accurately our results. Since the work was done entirely by our group and since the records are *fairly* accurate, a reasonably well controlled series can be reported. The smallness of our practice somewhat restricts, of course, the statistical validity of the study.

During the first period we used Demerol and hyoscine according to the Boston Lying-In technique. When a primigravida measured 4.0 to 5.0 cm. dilated, and when a multigravida was fairly in labor we started her on the following regimen:

Demerol, 100 mg. given intramuscularly; hyoscine, 0.6 mg. given intravenously; in 30 to 45 minutes — hyoscine, 0.45 mg. given intravenously; in an hour—hyoscine, 0.3 mg. given intravenously and repeated every two hours if necessary; in an hour—Demerol, 100 mg. given intramuscularly and repeated every three hours, if necessary.

Needless to say, we reduced most patients to a state of complete insensibility. They lay in a stupor, bathed in their own secretions. With each contraction they rolled, muttered, and clutched their vulvae. A few had uncontrollable mania; all required considerable watching. At that time terminal spinal anesthesia consisted of 50 mg. of Novocain given with the patient on her side. Caudal analgesia was given according to Hingson's recommendations and with the usual precautions to avoid intrathecal leak and hypotension. Our tendency was to prolong the process and make it serve for analgesia in the first stage, with resultant interference of the physiology of labor. Conventional local and pudendal block were used very rarely.

With the dawn of the second era a number of our patients demanded natural childbirth. These were largely faculty and doctors' wives from Chapel Hill and Durham.

The excellent results obtained by our new partner and the postpartum euphoria of these patients were impressive. Although the number of enthusiasts requesting natural childbirth in its unadulterated form was not great, it became evident that the principles of education and insight, emotional support, and allaying of anxiety were capable of general application, regardless of the technical details of the management of labor and delivery. Classes were held and movies were shown to give all the patients some understanding of the anatomy and physiology of pregnancy and childbirth. Patients were encouraged to ask questions during the classes and prenatal visits. We have in our group the advantage of a woman member with a special flair for discovering and allaying the anxieties of our patients. We made every effort to avoid making the patients feel foolish because of their questions, however trivial or time-consuming.

During labor the use of amnesic drugs was avoided. Demerol and Nisentil were used during the first stage. Self-administered Trilene proved safe and flexible for analgesia. We tried to adapt realistically the analgesia to the patient's emotional demands during labor. We never under any circumstances withheld what the patient needed to maintain her self-possession, and did not try to shame her into achievement. We learned that conduction block anesthesia, in order to be safe and effective, must be truly terminal. Saddle block cannot safely be used for analgesia, as Adriani pointed out as early as 1947, in his discussion at the Congress in St. Louis. We gave up entirely the use of hyperbaric solutions and more toxic agents, and, with the patient in a sitting position, routinely gave 50 mg. of Novocain in 1 cc. of cerebrospinal fluid without barbotage, then had her lie flat immediately with her head on a doubled pillow. The effect was almost immediate, and usually gave consistent anesthesia for from 40 to 90 minutes. With this dosage and method the use of vasoconstrictor drugs was found unnecessary. Caudal analgesia we used mainly for premature deliveries and multigravidas, particularly those known to have rapid labor. We tried always to avoid using it for longer than two hours, and usually made it a somewhat terminal affair. The advent of Xylocaine and spreading agents made the administration of pudendal block a far more certain and

satisfactory procedure. The only disadvantage seemed to be the time required—almost 20 minutes—for a block to exhibit its maximum effect.

Results

Infants weighing less than five pounds

As the survey progressed, it was obvious that any resumé of our use of analgesia and anesthesia would become a sort of general confession of our practice. Our sins of omission and commission were rather sharply revealed. Between 1946 and June, 1949, we delivered 80 babies weighing less than 5 pounds each. Twenty-six of these babies were stillborn or died during the neonatal period, a mortality rate of about 32.8 per cent. About 71 per cent of these babies were delivered under conduction block anesthesia. From July, 1949, to 1952, 69 babies weighing less than 5 pounds each were delivered. Sixteen died in the neonatal period or were stillborn, a rate of about 23.1 per cent. About 85 per cent were delivered under conduction block anesthesia.

We felt that this series was too small to have statistical validity, and the percentage of improvement in the second period was not significant. Methods for delivering premature infants certainly can stand improvement. Incidentally, the percentage of premature babies was essentially the same for both periods, about 5 per cent for the first and 4 per cent for the second.

Infants weighing more than five pounds

The main studies have been devoted to babies weighing more than 5 pounds, delivered during these periods. From 1946 to June, 1949, a total of 1300 babies weighing more than 5 pounds each were delivered. Six hundred and twelve were delivered from primigravidas and 688 from multigravidas. Eighty-six per cent of the primigravidas and 69 per cent of the multigravidas were delivered under conduction block anesthesia.

From July, 1949, to 1952 a total of 1,626 babies were delivered. Six hundred seventy-nine were born of primigravidas and 947 of multigravidas. Ninety-one per cent of the primigravidas and 88 per cent of the multigravidas were delivered under conduction block anesthesia.

Table 1 gives the frequency of the use of various agents for relief of discomfort during the two periods. All that these figures show is that we were just about giving up

Table 1
Analgesic Agents
Demerol and Hyoscine
1946—June 1949

Classification of Patient	Anesthesia	No.	Per Cent
Primigravidas	General	75	87.0
	Conduction block	413	78.5
Multigravidas	General	147	68.6
	Conduction block	225	47.4
July 1949—1952			
Primigravidas	General	13	22.4
	Conduction block	139	24.4
Multigravidas	General	55	48.6
	Conduction block	98	11.7
Trilene			
July 1949—1952			
Primigravidas	General	11	18.0
	Conduction block	185	29.7
Multigravidas	General	39	34.5
	Conduction block	197	23.6

cidence of sections, rotations, mid-forceps, versions and breech extraction, we felt, were added tests of our methods. These will be briefly reported, with the intention of giving more extensive reports on these procedures later. We felt that the ratio of low forceps to spontaneous deliveries would be interesting but not significant, since one member of the group was very fond of low forceps, another favored the biologic approach, and another occupied middle ground.

Neonatal deaths and stillbirths

From 1946 to June, 1949, we had a neonatal death and stillbirth incidence of 1.38 per cent. There were 9 neonatal deaths and 9 stillbirths. From July, 1949, to 1952 we had an incidence of only 0.74 per cent, or almost half that of the first period. We are of the opinion that this improvement was statistically significant. There were 7 neonatal deaths and 5 stillbirths during the second period. In tables 3 and 4 these facts are briefly summarized. Three of these losses probably could have been avoided by performing a section. One was the neonatal death following a prolonged labor; the other 2 were stillbirths resulting from difficult breech extractions. The other deaths could not be correlated with traumatic delivery.

The most disheartening losses are the unexplained intrapartum deaths under apparently optimal circumstances. Although the pathologists say these deaths occur because of separation of the placenta, only once did the placenta follow the baby's heels. That occurred in a patient who had been given 1 minim of Pitocin to stimulate labor after a period of stalling. All these babies were subjected to postmortem examination.

Cesarean sections

From 1946 to June, 1949, our gross section rate was 2.2 per cent, and primary rate 1.3 per cent. From July, 1949, to 1952 our gross section rate was again 2.2 per cent, but the primary rate was only 0.5 per cent. Again

the use of hyoscine during the second period.

Table 2 gives the number of the various conduction block anesthetics used during the two periods. No permanent damage of any description has been encountered in this study. The most troublesome complication has been headache following the use of saddle block and spinal anesthesia. We are not prepared to report on the exact incidence at present, as we feel our data are not altogether accurate. There was occasional opposition on the part of the patient, but as word spread patients began to request saddle block. By carefully observing Hingson's injunction to give a small test dose and wait 5 or 10 minutes, we never had a serious intrathecal leak of the caudal agent. A few cases of hypotension were controlled by posture and oxygen. No authenticated case of sensitivity to an anesthetic agent was encountered during either period.

The validity of our methods was then tested by a scrutiny of the neonatal deaths and stillbirths, and the number of babies who failed to breathe and cry immediately upon birth during the two periods. The in-

Table 2
Types of Conduction Block Anesthesia
1946—June 1949

	Caudal	Spinal	Saddle Block	Local	Continuous Spinal	
Primigravidas	78	405	17	10	9	
Multigravidas	179	220	34	19	11	
July 1949–1952						
	Caudal	Spinal	Saddle Block	Local	Continuous Spinal	Novocain Saddle Block
Primigravidas	25	224	124	80	3	166
Multigravidas	163	156	209	108	15	180

Table 3
Summary of Neonatal Deaths and Stillbirths
1946-June 1949

Neonatal Deaths

Case	Cause of Death and Complicating Conditions	Time of Death	Birth Weight lbs. oz.	Maternal Factors	Obstetric Factors
1	Meningocele; deformity				
2	Cerebral hemorrhage		5 1	Para 3-0-3; induced for toxemia	Spontaneous delivery under general anesthesia
3,4	Congenital heart condition				
5	Asphyxia	1 hour after delivery	7 2		Spontaneous delivery under local anesthesia
6	Uncertain; Postmortem showed no hemorrhage	5 hours after delivery	10 12	Para 0-0-0	Kielland rotation under spinal anesthesia; (first stage 108 hours, second stage, 4 hours, 10 minutes); cesarean section should have been done
7	Uncertain; postmortem showed slight atelectasis	6 hours after section	6 6	Para 0-0-0; elderly primipara obesity, hypertension myoma	Elective section under ether
8	Atelectasis, polydactylism, epigastric hernia, absence of gallbladder	12 hours after delivery	6 9	Para 0-0-0	Low forceps delivery under spinal anesthesia
9	Undetermined; postmortem unrevealing	2 minutes after breathing and crying at birth	6 3		Breech extraction; infant first of twins

Stillbirths

1,2,3	Maceration				
4	Asphyxia; true knot in cord		5 4		Spontaneous delivery under gas oxygen anesthesia
5	Unexplained by postmortem	Intrapartum	6 4		Spontaneous delivery under local anesthesia and ether
6	Death due possibly to short cord; postmortem unrevealing	Intrapartum	6 7		Spontaneous delivery under caudal analgesia
7	Unexplained	Intrapartum	5 0		Spontaneous delivery without anesthesia
8	Asphyxia			Para 1-1-0	Difficult breech extraction under ether, caudal analgesia; cesarean section should have been done

we feel that this, like the drop in neonatal deaths and stillbirths, was significant. Table 5 gives the indications for which we performed primary sections during the two periods. All others were repeat sections.

We have been greatly interested in noting that all great clinics report a much higher section rate on the private services. Everyone seems to swallow this fact without a grimace. Private patients are usually taller, better nourished, and more capable of attaining insight and rising to demands than

are service patients. Their intelligence is usually, but not invariably, higher than that of service patients. Fewer obstetrical catastrophes requiring emergency consultation occur on the private service. Conversely, the babies of service patients are as precious and are entitled to exactly the same consideration as are those of private patients.

What is the answer? Can those in the upper brackets buy more medical care than is good for them? An ex-debutante or Junior Leaguer, treated with kindness and given in-

Table 4
Summary of Neonatal Deaths and Stillbirths
July, 1949-1952

Neonatal Deaths

Case	Cause of Death and Complicating Conditions	Time of Death	Birth Weight lbs. oz.	Maternal Factors	Obstetric Factors
1	Atelectasis and cerebral hemorrhage		6 11	Para 4-3-1	Spontaneous delivery under saddle block anesthesia
2	Intracranial hemorrhage; atelectasis with hyaline membrane	8 hours after delivery	6 1½	Para 0-0-0	Difficult decomposition and extraction under ether (LSA); first stage, 41 hours 30 minutes; second stage, 1 hour 5 minutes; cesarean section should have been done
3	Meningocele; polycystic liver and kidney; malformed stomach				
4	Congenital heart condition; coarctation of aorta				
5	Atelectasis, hyaline membrane	36 hours after delivery	6 8	Para 2-0-2	Repeat laparotrachelotomy under continuous spinal anesthesia
6	Congenital atelectasis with hyaline membrane	24 hours after delivery	5 2	Para 0-0-0	Spontaneous delivery under spinal anesthesia; gas oxygen analgesia
7	Congenital atelectasis with hyaline membrane; agenesis of pituitary gland; hypoplasia of adrenal glands	9 hours after section	6 4	Para 1-0-1	Repeat elective Waters' section under caudal analgesia

Stillbirths

1	Unexplained; post-mortem unrevealing		5 13	Para 1-0-1	Delivery by low forceps as fetal heart beat was lost; delivery was imminent and patient was already under saddle block anesthesia
2	Maceration; death due partly to Rh sensitization in mother			Primi-gravida; Rh sensitization by previous transfusion	
3	Maceration; cause of death unknown				
4	Postmortem showed hypertrophy of pancreatic islets and horseshoe kidney	Intrapartum	6 12	Para 0-0-0; severe diabetes	Spontaneous delivery under local anesthesia; Demerol and hyoscine
5	Asphyxia shown at autopsy; premature separation of the placenta		7 3	Para 5-0-5	Kielland rotation and extraction under spinal anesthesia; Demerol and hyoscine

sight and emotional support, will use her capacity to "bear down" as diligently and with as much fortitude as Rosie O'Grady. We have always considered the capacity to bear down a precious one, to be cherished, not interfered with by heavy sedation, caudal, premature spinal, or saddle block anesthesia. The perineal reflex, properly encouraged, may make the difference between an

easy delivery and a traumatic one, or between a section and no section.

Delayed breathing

Another test of the validity of our methods was to be found by studying the number of babies that were slow to breathe and cry. Table 6 gives the numbers and percentages. Our faces were red, because it looked as if

Table 5
Analysis of Primary Sections
1946-June 1949

Indications	No. Cases
Primigravidas	
Disproportion (1 LMT 1 LST)	6
Inertia	3
Inertia and disproportion	2
Placenta previa	2
Myoma hemorrhage	1
Myoma, obesity, and hypertension	1
Multigravidas	
Disproportion	2
July 1949-1952	
Primigravidas	
Inertia	2
Inertia, disproportion	2
Disproportion	1
Multigravidas	
Disproportion	1
Transverse lie in bicornate uterus	1
Placenta previa	1

we had had better results under the Demerol and hyoscine regimen. This table lists the babies who did not breathe or cry immediately on birth. During the second period we tried a number of synthetic analgesics without hyoscine, and our impression was that one agent seemed to delay fetal respiration. Since these studies are incomplete and we wish to avoid doing an injustice to the manufacturer of this product, we do not elaborate at present. At least we can safely say that conduction block is superior to general anesthesia.

The incidence of inertia further tests our methods. Under the regimen of emotional support there was a definite drop, as shown in table 7. The incidence of breech presentations was about the same for the two periods, in spite of our policy to do external versions whenever possible. For the first period the incidence among primigravidas was 4.7 per cent, among multigravidas 2.4 per cent; and for the second period, 3.9 and 2.3 per cent respectively. The neonatal mortality and stillbirth rate for breeches during the first period, however, was 4 per cent and during the second, 2 per cent.

Traumatic procedures

Concerning potentially traumatic procedures, we made some very elaborate tables which we will summarize to avoid tedium and confusion. During the first period the incidence of Kielland rotations for primigravidas under conduction block was 2.6 per cent. For the second period the incidence rose to 4.8 per cent, a rise which we feel was due to the occasional, ill advised use of

Table 6
Babies Who Did Not Cry or Breathe Immediately
1946-June, 1949

Patient	Type of Anesthesia	No.	Per Cent
Primipara	General	22 out of 86	25.6
	Conduction block	16 526	2.9
Multipara	General	24 214	11.2
	Conduction block	11 474	2.3
July 1949-1952			
Primipara	General	12 58	20.6
	Conduction block	14 621	7.4
Multipara	General	14 113	12.3
	Conduction block	34 834	4.0

Table 7
Incidence of Inertia

	1946-June, 1949		July 1949-1952	
	No.	Per Cent	No.	Per Cent
Primigravidas in labor longer than 18 hours				
General anesthesia	25	29	11	18
Conduction block	122*	23	112	18
Multigravidas in labor longer than 12 hours				
General anesthesia	34	18	17	15
Conduction block	77	16	91	11

*In this group, 1 baby was slow to breathe.

caudal anesthesia on primigravidas. For multigravidas under conduction block anesthesia, the incidence of Kielland rotations was 6.9 and 5.9 per cent respectively for the two periods. The use of mid-forceps for primigravidas was 1.5 per cent for the first period, 0.9 per cent for the second. Among multigravidas the use of mid-forceps was 0.4 and 0.1 per cent.

Version and extraction has been almost entirely abandoned by our group. During the first period only 5 versions were done, all under deep ether anesthesia on primigravidas. Three were done under conduction block on the second of twins, and 2 babies were so delivered from multigravidas under general, and 1 under conduction block. During the second period, or period of enlightenment, only 3 versions were done, all on the second of twins of primigravidas under conduction block anesthesia. We regard version and extraction as a valuable procedure for Ambrose Paré, but not so valuable in modern obstetrics.

Among the babies delivered by major obstetric procedures, reluctance to breathe was not a problem. There were 7 such cases during the first and 4 during the second period of our practice. During the first period the

ratio of low forceps to spontaneous deliveries was 6 to 5, for the second period 5 to 9. Since the neonatal mortality is the same for low forceps and spontaneous delivery these ratios may not be too significant, but are indicative of our somewhat more physiologic approach.

Conclusion

We have concluded that treating women as rational human beings, giving them insight into pregnancy and labor, and providing maximum emotional support during labor pays dividends in maternal safety and fetal salvage. We feel that heavy sedation and amnesic drugs have no place in modern obstetrics, and that meticulous and selective use of conduction block anesthesia, although not ideal, is safe.

Discussion

Dr. Harvey C. May (Charlotte): In his usual erudite manner Dr. Pearse has outlined for us a program of obstetric analgesia and anesthetics employed by him and his associates. They have placed the emphasis upon education of the mother, maximal emotional support, as little sedation as possible without amnesic drugs, and the use of terminal conduction anesthesia. They are due a great amount of admiration for their courage in opposing a system of analgesia and anesthesia which has been well accepted by the profession, and particularly by the pregnant woman, ever since Von Steinbuckel first employed "twilight sleep" in 1902. All of us have had the annoying experience of being told by a patient, on her first visit, that she wants to be assured that she will have no pain. She makes no mention of the proper care of herself or of the safe delivery of her expected child. I do not feel that these women are particularly selfish, but that they do not understand the dangers of analgesia and anesthesia. It is here that education of the mother is of particular value. I question, however, that we can convert an emotional immature child into a mature woman in a matter of a few short months.

I do object to the use of the term "natural childbirth," and I have yet to be convinced that moderate sedation or even amnesia interferes with the physiology of labor, and certainly no more than does conduction block anesthesia unless it is absolutely terminal. Dr. Pearse wants his ex-debutantes and Junior Leaguers to "bear down." I can see no advantage in having the patient wear herself out during the first stage of labor, and would like to ask Dr. Pearse of what benefit this effort is when the patient is delivered under caudal or some form of spinal anesthesia.

The author's statistics on stillborn and neonatal deaths, are simply magnificent. He has quoted a combined neonatal death and stillborn percentage of only 0.74 per cent. One can not dispute the success of his group when judged in these terms. For comparison, I secured the figures for the years 1950 through 1953, inclusive, at the Presbyterian and Charlotte Memorial Hospitals. In the former hospital, in which 6,083 deliveries were performed, the total uncorrected stillborn figure was 1.4 per cent, and the uncorrected neonatal deaths 1.7 per cent. At the Memorial Hospital, where 5,146 deliveries were

performed, the stillborn percentage was 1.78 per cent and neonatal deaths 1.75 per cent. In each of these institutions the total uncorrected fetal loss was in excess of 3 per cent, and the vast majority of these deliveries were performed or supervised by qualified men. Likewise, the vast majority of these infants were delivered under sedation and general anesthesia.

One cannot overlook the safety of the mother in evaluating this method of analgesia or anesthesia. Drs. Pearse, Easley, and Podger report no maternal catastrophe. There can be no doubt that under general anesthesia the aspiration of stomach contents is a great possible danger, particularly when barbituates have been employed and the cough reflex is further abolished. Having been trained in New Orleans, I can only applaud the use of some form of conduction anesthesia for delivery. May I congratulate Drs. Pearse, Easley, and Podger again for their courage and for showing us what can be done by education and emotional support of the mother. To quote Dr. Isadore Dyer: "Although one cannot fully subscribe to the psychological approach of Grantley Reid, there must exist a mode between this and the common practice of forced coma in labor. If one errs, a better result will be the rule, if that error is on the conservative side."

Dr. Pearse (closing): We do not have the patients bear down until they are fully dilated. We find that a patient under carefully given low caudal and or saddle block can use her voluntary muscles of expulsion with some degree of effectiveness. The peritoneal reflexes are abolished and the patient has to be coached, but a surprising amount can be accomplished by standing by and encouraging the patient. If a reasonable amount of coaching does not lead to spontaneous delivery, we perform an easy low forceps delivery without a qualm of conscience.

Advances in surgery: Surgery, as practised today, has become such a familiar experience in the life of the community that it is difficult to realize that it is the result of a rapid evolution during only two generations of doctors. Up till the middle of the last century the whole field of surgery was severely limited by three great obstacles—pain, haemorrhage and sepsis. The discovery and exploitation of anaesthetics removed the first handicap, the introduction of the ligature greatly diminished the second. The elimination of the third great obstacle to surgery, sepsis of the tissues about the wound, or "putrefaction," as it was formerly termed, was a much slower business. It did not depend upon a chemical or a physical discovery, it was the result of a patient and persistent pursuit of an idea born and bred in the mind of Joseph Lister. Inasmuch as the whole of the surgery of today is the child of Lister's conception that sepsis results from contamination of tissues exposed by the surgeon's knife to living microbes—and this conception lay at the root of all his painstaking work throughout a long and ennobling life—Lister has been justly called the "father of modern surgery."

To the genius of one man more than any other Lister owed a tremendous stimulus in the pursuit of his investigations and in the confirmation of his views. This was Louis Pasteur, with whom, over many years, he corresponded freely. Pasteur's experiments and discoveries formed an ultimate basis for, and a justification of, Lister's efforts. The cordiality of the relations between the two men, and their mutual respect and affection, provide a unique chapter in the history of medical science and of humanism.—Horder, L.: *Fifty Years of Medicine*, New York, Philosophical Library, 1954, p. 14.

THE INTERRELATIONSHIPS BETWEEN PSYCHIC AND PHYSICAL FACTORS IN THE PRODUCTION OF MENTAL ILLNESS IN THE AGED

ROBERT H. BARNES, M.D.

EWALD W. BUSSE, M.D.

and

ALBERT J. SILVERMAN, M.D.

DURHAM

Mental disorders in the elderly have, until recently, remained largely outside the "body image" of modern psychiatry, excluded from consciousness as a paretic extremity, as a dead weight which could contribute little to our knowledge of the human mind. And so these illnesses were left to the general practitioner, the cardiologist, and ultimately to the pathologist, and to the latter only if some special interest in tumors or other peculiarities of the aging body prevailed. Like that of the nineteenth century alienist, our only role and interest was in completing the necessary papers for commitment, after a brief examination of the elder had revealed the usual picture of senility—in our minds, a picture caused purely by organic, readily demonstrable changes in human cerebrum.

Then, for various reasons and from various areas, came indications that this concept was not in accordance with the facts, and we soon found that more was expected of us as psychiatrists when dealing with the disturbed oldster than a knowledge of commitment procedures. From the medical side, as the treatment of congestive heart failure improved, many noted that the supposedly unalterable picture of senility could frequently be dramatically reversed with digitalis, diuretics, and salt-free diets. The reversibility of what often appeared to be senile psychotic disorders with niacin⁽¹⁾ led some to develop a less stereotyped and inflexible view. Thus the personal experiences of many physicians suggested that mental diseases of the aged were not the ultimate and unchangeable stigmata of old age. And psychiatric physicians began to take a more charitable view and to realize that explorations into the emotional problems of the el-

derly did not always lead to a therapeutic blind alley. Abraham⁽²⁾, in the early days of the century, suggested that even deep insight therapy was possible in elderly people. The advent of electroshock therapy, and the discovery of special techniques allowing for its safe administration even to the "poor-risk" patient, made possible the successful treatment of the depressed old person⁽³⁾.

From other groups, too, came suggestions that old age and its psychologic reactions were a fitting field for more than morphologically oriented thinking. Sociologists⁽⁴⁾ began to suggest that social activities and lifelong personality factors played an important role in determining the mental status of the old person. World War II brought increased interest in the elderly worker, whose contribution to the war effort was great, and in the postwar era rehabilitation and interest in the chronically ill and aged became epitomized in Howard Rusk's concept of the "Third Phase of Medicine."⁽⁵⁾ Thus we were urged to think and work in this previously abandoned area.

Many years ago, in studying the psychologic patterns of response in general paresis, Paul Schilder⁽⁶⁾ pointed out that "... the boundaries between the organic and psychogenic seem to be not very sharply drawn even in such conditions as paresis." This was well demonstrated in the pioneer work of Rothschild and his associates⁽⁷⁾ with psychotic conditions in the elderly. One of his titles is illuminating—"The Origin of Senile Psychosis: Neuropathic Factors and Factors of a More Personal Nature." Briefly summarized, he attempted to correlate autopsy findings with the psychiatric picture. In general he was unhappy with the poor correlation between the pathologic and the clinical findings. Many cases with advanced clinical features of senility were largely free of parenchymatous pathologic changes, and conversely many people who functioned well psychically until death demonstrated rather marked senile arteriosclerotic brain changes. Thus the techniques of pathology made only a very limited contribution to our understanding of the psychology of normal and pathologic aging. The same may be said of the physiologic studies of cerebral circulation and metabolism. While the cerebral blood flow and the cerebral metabolic rate both decrease with age, their relation to both normal and pathologic aging is not clear⁽⁸⁾.

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From the Department of Psychiatry, Duke University.

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Thus it more and more appears that an understanding of the psychologic and psychiatric problems of aging must come from a consideration of more than physical changes in the nervous system or in the body elsewhere. Yet these physical changes cannot be ignored, either in their direct effects on the psyche or in indirect effects as they influence the aging person's concept of self—his "body image." In no area of medicine are we in more need of a multi-dimensional and a multi-discipline approach to both clinical and research problems. No area of medicine is more properly to be considered "psychosomatic" in the broadest sense. Such studies may never make it possible for the average person to function in his 70's as have Bernie Baruch or Alben Barkley, but they may make it possible to keep many of ourselves and our contemporaries out of the same state hospitals where more and more of the Baruch-Barkley generation have ended their days.

Method and Material

Our own interest in elderly people came about through attempts to interpret the unusual electroencephalographic patterns we frequently found in people of 60 or over. Therefore, we instituted a program, and in three years the authors studied a total of more than 250 individuals of 60 years and over. Our own interests, as well as the need to know a great many things regarding each individual subject that we were using as electroencephalographic controls, soon caused us to expand our efforts into a more extensive study of the aging processes. Two large groups, all persons of 60 years and over, and divided into a *Senile Group* and a *Community Group*, have been studied as follows: (1) careful medical, social, and psychiatric history; (2) complete physical and neurologic examination; (3) routine psychiatric mental status evaluation; (4) complete blood counts, serology, urinalysis, blood sugar and non-protein nitrogen; (5) electroencephalography; (6) psychologic testing, including the Rorschach, Wechsler-Bellevue, and Weigl Color-Form Sorting Tests. The electroencephalographic tracings were made on 8-channel Grass instruments. The *Senile Group* was composed of recently hospitalized persons, placed in a psychiatric hospital because they were no longer able to function on the outside. People with complicating vas-

cular accidents and other neurologic lesions were excluded. The *Community Group* was recruited from three sources: (1) The outpatient facilities of a large university clinic; (2) volunteers from the community who came to us in answer to our direct appeals for subjects (these were all retired individuals); (3) another group of volunteers who were still active in their life's work (this included a sizable number of elderly doctors). All persons in the *Community Group* were without evidence of vascular accidents or other complicating neurologic lesions. Also, none had physical disabilities known to affect central nervous system functioning.

Results

These have been published and presented⁽¹⁾ elsewhere and will only be summarized here to the extent that they are pertinent to the title of this paper:

(1) The *Senile Group* revealed the highest percentage of both diffuse and focal electroencephalographic abnormalities, with only 20 per cent of the subjects demonstrating what could be considered as normal electroencephalograms. Our electroencephalographic definition of normal is somewhat more liberal than for younger adults, requires the dominant rhythm to be within the 8-12 per second range, but does allow for some scattered activity within the 6-8 per second range. In the *Senile Group*, 64.5 per cent had demonstrable generalized dysrhythmias of variable degrees of severity.

(2) At the other end of the spectrum, as far as function is concerned, was the group of elderly people still employed. Here, 61 per cent had electroencephalograms which were within the normal category.

(3) In between were those in the *Community Group* who were retired and obtaining medical care in the University Outpatient Clinic. In this group only 44 per cent had electroencephalograms which met our criteria for a normal classification.

(4) The outstanding electroencephalographic finding in the *Community Group* as a whole was the relatively high percentage of focally disturbed records. These constituted over one third (37 per cent) of the total, and ranged in severity from minor focal slowings to very severe spike and spike and delta foci. The majority of these occurred in records without other evidence of abnormality. With one exception, these foci were

temporal in location, and 8 out of 10 were located on the left. This could not be correlated with handedness or eye dominance.

(5) When the psychologic test results were correlated with the electroencephalographic findings, it became clear that those, irrespective of groups, with diffusely abnormal electroencephalograms functioned intellectually at a much lower level than those having either normal records or only focal disturbances in their tracings. Interestingly, the focal disturbances did not correlate with any intellectual or emotional features discernible in the psychologic test data.

(6) Those persons within the *Community Group* who continued to work had somewhat higher intelligence quotients and more activities and outlets in addition to their work. Depressive episodes were much less common in those who worked, and hypochondriacal preoccupation was less frequent.

(7) Depressive episodes which were frequently seen in the *Community Group* appeared to be the result of loss of self-esteem from the recognition of their own weaknesses and inability to obtain the satisfactions from the environment they had experienced as younger people. Guilt appeared to play a relatively minor role. The mechanisms by which they emerged from their depressive episodes is not clear.

(8) With regard to affect, the *Community Group* as a whole showed little evidence of capacity to express warm and spontaneous feelings toward others.

Comment

If one accepts electroencephalographic abnormalities as reliable indicators of altered cerebral functioning, then it appears that we have considerable evidence pointing toward a much higher incidence of disturbed cortical functioning in the senile individual than in the so-called normal old person. And further it would appear that the more effectively the old person functions, irrespective of age, the more likely is he to have normal cortical functioning as reflected in the electroencephalogram. While this is true statistically, we are still faced with a sizable number (20 per cent) of senile individuals who show no electrographic evidence of disturbed cortical functioning, and contrariwise, a much more sizable group (56 per cent) of elderly people who functioned adequately outside hospitals and nursing homes despite

abnormal electroencephalograms. Thus, in a tentative way, we must conclude that there is more to adequate functioning in the aged than normal cortical activity as reflected by the electroencephalogram.

Of special interest to us have been the high percentage of persons with evidence of isolated temporal foci in their electroencephalograms. As pointed out, these focal changes did not appear to jeopardize the person's functioning in any way. Without autopsy correlations, which have been impossible in our work to date, we cannot say with any high degree of certainty what and where the organic changes they reflect may be. However, our own experiences with temporal lobe epilepsy, in terms of electroencephalographic correlation with operative findings, coupled with a recent article⁽¹⁰⁾ correlating clinical and electroencephalographic findings with autopsy results, would suggest that they represent sclerotic changes (probably vascular in origin) in the hippocampal tip (tip of Ammon's horn). Whether this can be verified and what its implications are will await further work. It may be, of course, that these foci are early indications of vascular changes which will ultimately become generalized. This possibility can only be approached through later follow-up studies.

While our findings indicate that those who work and who keep up many activities and interests seem to escape the major mental illnesses and disabilities of old age, this cannot be taken as a simple cause and effect relationship. Quite another sequence may exist—those who have escaped senility may have done so because they have had less organic dysfunction to adapt to. Until we can study more carefully the life histories of people who have become senile and compare these with the life histories of those who still function adequately, the importance of personality functioning in the cause and prevention of mental illness in the aged cannot be assessed. Our preliminary impression, supported by the work of others, is that adequate adjustment techniques are of major importance, but that these patterns have to be laid down before old age arrives; that this cannot be postponed until 60 or even 40 years of age, but must begin in early life, even childhood.

How the brief depressive episodes and hypochondriacal preoccupations we have noted

in old people are related to aging remains unanswered. Possibly these factors, coupled with the withdrawal of affect from the environment that appears to be a usual response to aging, lead to metabolic changes and in turn to disorders in food intake, with nutritional disturbances. Is such a sequence another possible link between the functional or psychic and the organic aspects of mental illness in the aged? We are so deeply impressed with this possibility that we intend in future research to have close advice from nutritionists.

Summary

We have attempted to point out the importance of other factors than the strictly organic in the production of mental illness in the aged and to present certain of our own preliminary research material tending to support this view. We recognize that this represents the barest beginning, but we look forward to continued work in this area of study by ourselves and others answering some of the questions raised.

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Food allergy: In some cases a specific allergen may be suspected from occurrence of symptoms on certain days of the week when certain foods are taken, from the season of the year, when certain foods ripen or are habitually eaten, when change in fodder of cows may include the patient's antigen or when certain pollens are known to be prevalent in the atmosphere.—Andresen, A. F. R.: *Allergic Manifestations in the Gastrointestinal Tract, Gastroenterology* 23:23 (Jan.) 1953.

THE PHYSICIAN'S ROLE IN PREVENTIVE PSYCHIATRY

ROGER WILLIAM HOWELL, M.D.

CHAPEL HILL

The most important part of my daily work consists of doing everything possible to improve the mental health program. Such a program needs help from many sources, the most important of which is perhaps the medical profession. Workers in mental health do not believe it presumptuous to suggest that they have help to offer the medical profession as well. We hope that physicians will agree.

The developing mental health program in North Carolina is currently receiving considerable attention. The interest which has been shown in increasing much needed facilities is indeed gratifying. The willingness of the people of our state to appropriate public monies for the continued improvement of treatment indicates a response to fine leadership in the field of mental health. Our governing bodies and those charged with administrative responsibility in the mental health program deserve genuine congratulations for their foresight and energy. Those devoted individuals who have been working with our mentally deficient and deranged population have shown, through their tireless efforts, that psychiatric treatment is a worthwhile investment. The limitations of personnel and actual housing facilities under which they have had to work would have long since discouraged a lackadaisical group. They, too, deserve high praise for their zeal and persistence.

A long held tradition in psychiatric circles focuses upon the hospitalization and treatment of ill persons. Obviously this is a much needed approach, and no one with any sense of humanity will believe that present facilities are adequate. Mentally sick people will continue for many years to come to make up an all too large percentage of our population. The construction of hospitals in which they can receive adequate care and treatment will continue to be a must.

Leaders in Local Programs

Hospitalization and treatment of the individual is not the only part of the program

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which needs support and expansion, however. Psychiatry has undergone considerable growth. Today the consideration of a mental disturbance cannot be confined to the patient alone, as a single entity does not exist in psychiatry. The parents, the family, and the community are inevitably involved in every patient's illness. There is reason to believe that this is as true in less populated areas as it is in large cities. Mental illness has become such a problem that it cannot be managed on the state level alone. Any program must reach deep into the grass roots, where mental illness develops and where it is discoverable in its earliest phases. Health enterprises of any sort depend upon the local physicians for leadership. If a community becomes interested in increasing its psychiatric facilities, it is naturally going to look to its physicians for guidance and leadership. Every community contains other persons who will be only too glad to assist in the project, but they cannot, and they probably will not, unless the doctors lend their support.

Here a personal observation seems to be indicated. It was my unpleasant experience, some years ago, to see a medical society decline to support the establishment of a greatly needed psychiatric clinic. Adequate financing was being provided, and a petition signed by important agencies in the community was presented. The clinic did not get started. On the brighter side, several rather new clinics in North Carolina have been given whole-hearted support by the local medical societies, and they continue to increase in effectiveness.

Physicians can assume, therefore, as one of their roles in preventive psychiatric programs, a responsibility for leadership in promoting local programs.

Diagnostician and Therapist

Perhaps the most important role which the physician can fill is also that which best fits his function as a diagnostician and therapist. As Dr. Paul Lemkau pointed out in a recent paper read before the North Carolina Society of Neurology and Psychiatry, evidence which has been accumulating over many years suggests that early life experiences have an important bearing on behavior in later life. Since the middle of the last century workers in psychiatry and allied fields have been adding to our knowl-

edge of the dynamics of behavior. It is now known that psychiatric illnesses do not often occur suddenly and without warning. Each sick person has a history which reveals, if we are patient enough to find them, the premonitory symptoms and the precipitating factors. Simply stated: "Coming events cast their shadows before them." These premonitory shadows not infrequently cause trouble for the associates of those in whom they are developing. Parents recognize fairly readily the signs of anxiety and fear in their children. A pediatrician can spot the child who has too many temper tantrums as easily as he can observe a strabismus. A school teacher sees obvious evidences that one of her pupils is too withdrawn and fanciful. When these warnings are observed, the troubled individual is usually taken to the doctor, who is thereby presented with an unusual opportunity to make an early diagnosis and institute appropriate treatment.

Doctors as a source of referral

Most physicians do not credit themselves with sufficient knowledge of the field of psychiatry to undertake the diagnosis and treatment of mental illness. Psychiatrists generally believe that the average physician is fully qualified to diagnose and treat many minor psychiatric disturbances, especially if treatment is instituted early in the disease process. Many doctors who graduated from medical schools before the recent modifications in medical curriculums feel that they need further training in psychiatry designed for the general practitioner. Such courses are being given by most good medical schools. Since the emphasis in these courses is upon the early signs and symptoms, and methods of managing emotional disorders, attendance on one of these courses is another contribution which the physician can make to preventive psychiatry. Should one feel, however, that more thorough diagnosis and treatment is needed, physicians can do a great deal to help bring this about. The provision of psychiatric facilities will go far in attracting psychiatrists to local communities. Psychiatrists need hospital beds for their patients, just as surgeons do. They need nurses who are at least willing, even if not eager, to work with psychiatric patients. There are a number of areas in North Carolina where psychiatric patients are not admitted to the local hospital. Only physicians can remedy this undesirable situation.

Outpatient clinics or mental hygiene clinics should be made available to a greater number of our needy patients. Without help from the physicians of the state, they probably will not develop.

There is now acceptable evidence substantiating the thesis that early recognition and treatment is a factor in the prognosis of any emotional disorder. Hollingshead and Redlich, in a study of 847 patients under treatment for schizophrenia in the city of New Haven on December 1, 1950, concluded that early referral is one of three important contributing factors in successful therapy. The other two are: referral by a physician rather than a public agency or court; and good treatment by well trained personnel. After concluding that patients from a higher socio-economic class show the greatest improvement, these authors continue as follows:

Schizophrenics in the highest class enter treatment earlier. This early treatment may be extremely important, especially if the upper class schizophrenic receives better treatment than the lower-class one. The upper-class schizophrenic enters treatment through medical channels; the lower-class schizophrenic through legal ones. Stated more dramatically, the upper-class patient rests on a therapist's couch, the lower-class one on a prison or hospital cot.

Treatment is markedly different in the upper and lower classes. However, the differences during the acute phases of the illness are less marked than in the more chronic stages. Nevertheless, a relationship to class exists even when acute schizophrenics in one particular institution are compared by class.

Once in a mental hospital, the lower-class schizophrenic is less likely to leave permanently, he rarely has more than one chance in the community. If he does not make the grade, he becomes a permanent resident of the institution. This fact makes us assume that the role of the community and its most important unit, the family, is of enormous importance in determining who stays in the hospital and who becomes re-integrated with his family. We believe that the forces operating in the family are a very powerful determinant for social recovery.

There is a good deal of meat for physicians in the above quotation. It is logical for us to think that physicians are better prepared to make proper referrals of patients to resources for treatment. Doctors should be in the best position to recognize symptoms of mental illness and to know what therapeutic facilities are within reach of their patients. Doctors are usually the first persons consulted by people in trouble, and therefore have the best opportunity to make early referral. Doctors are in the best position to know about the family and domestic stresses,

and, being the first line of contact with the family, can help prepare a better reception for the patient when he returns to social life. These same factors apply—only perhaps more so—to those who are to be treated as outpatients. Thus the second contribution which the physician can make to the preventive psychiatric program is, early diagnosis and treatment.

Molders of Public Attitudes

The last suggestion which seems indicated concerns attitudes of people about mental illness, psychiatry, and psychotherapy. A large portion of the population still reacts with fear and resentment to people with mental illnesses. This attitude is a hang-over from the days when such persons were regarded as lunatics, weak-willed, and unfit for social intercourse. Though diminishing rapidly, it still prevents many people who really need help from getting it. The physician is in a position to do a great deal about this situation. He is looked upon as the health authority in his community, and if he shows a healthy concern and interest in mental health, many of his admirers will adopt his attitude. Too, the physician may find it necessary to help some of his patients accept the help which is indicated. Patients who are adequately prepared for psychiatric treatment generally do well, whereas patients who do not understand the need or the methods employed do not do well as a rule.

Summary

Physicians, as community leaders in health enterprises, must support advances in psychiatric methods for North Carolina, or the program will not develop. They must recognize the need for improved hospital facilities, adequate outpatient clinics, and trained personnel. They must support the expansion of facilities which already exist, but in insufficient quantity.

Doctors can do a great deal to enhance the efficiency of the facilities by interesting themselves in the process of early diagnosis and treatment. They can handle many of the problems which come to them in such a manner that healthier emotional living becomes a pattern for the State of North Carolina.

NORTH CAROLINA MEDICAL JOURNAL

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

JANUARY, 1955

A SPIRITUAL REBIRTH URGED

At the American Medical Association's
Clinical Meeting in Miami, our neighbor
Julian Price, formerly editor of the *South
Carolina Medical Journal* and secretary of
the South Carolina Medical Association and
now an A.M.A. trustee, stole the show with
his paper delivered before the pediatric
group—"The Man Behind the M.D." One of
the Miami papers gave it a prominent place
on the front page, and several other papers
in other parts of the country used it as the
basis for editorials. As George Lull said in
his weekly letter for December 20, "It really
rang the bell with the public."

In this paper Dr. Price said that . . .
the physical and mental health of our nation
is relatively good but that there is evidence
of spiritual disease.

"Since the disease is spiritual," he said, "the
treatment must also be spiritual." He added
that the symptoms were not hard to find.

"Dr. Price listed among them 'laxness of
morals in our national government in recent
years . . . the hold which organized vice has
upon legislative and social life . . . increase in
crime in our teen-age population . . . bribery
and unethical conduct in amateur athletics
. . . the mad search for pleasure which causes
our people to spend four times as much for
beverages as they do for religious and welfare
activities . . .'"

"He called upon his fellow physicians to com-
bat this 'disease' by taking part in government,
devoting particular interest to public education,
working with boys and girls, and charitable and
philanthropic organizations, and having heal-
thy, happy homes of their own.

"The only remedy which is of any avail—
and to this history bears testimony—lies in a
change of heart. It is my sincere belief that the
greatest need of our country today—and of our
profession—is a spiritual rebirth, a return to
God and to his eternal principles. And the re-
birth must come in the heart of the average citi-
zen—and in the heart of the average doctor of
medicine."

A big reason for the effectiveness of
Julian Price's message is that he was speak-
ing from the heart, as he himself is one of
the finest examples of the successful Chris-
tian physician.

* * *

NEED FOR PUBLIC UNDERSTANDING OF DRUG PRICES

Dr. George Lull's weekly "Secretary Let-
ter" is always read with great interest in
this editorial office, for George always has
something to say and says it well. His
Christmas week letter, dated December 20,
is perhaps the best yet. It began with an
exquisite prose poem, "Merry Christmas to
All." Then came the reference to Dr. Julian
Price's paper, which has been used as an edi-
torial for this JOURNAL.

Another very timely comment concerned
an address given by Mr. John Bach, director
of the American Medical Association's press
relations, to Parke, Davis & Company exec-
utives. Mr. Bach said that there was a real
need for the public to be given a better un-
derstanding of antibiotic drug prices. As
an illustration, he said, "Five dollars worth
of penicillin can eliminate the need for a
\$150 mastoid operation and \$200 in hospital
bills." Another example was the treatment
of pneumonia. Antibiotics have changed the
former death rate of 33 per cent to 1 or 2
per cent—not to mention the saving in hos-
pital and nursing bills, and the man hours
lost from work.

Mr. Bach then called attention to the much lower prices of the antibiotics now as compared to the early prices: "In 1944 penicillin cost \$20 for an average dose of 100,000 units. Today, it is anywhere from two to eight cents for the same amount. Streptomycin came on the market at \$15 a gram. Today, the same amount can be bought for 15 cents. Some of the more recently developed antibiotics in the 'broad spectrum' group have been cut 50 per cent in price."

In this effort to help the public understand the manufacturer's viewpoint, the physician can be of inestimable help. He should be interested also for the selfish reason that the public are apt to lump all the costs of illness, including hospital, nursing and drug bills, as "doctors' bills." A more enlightened and unselfish view is that the pharmacist is—or should be—one of the doctor's best friends, and they should work together for the common good of the patient.

* * *

SHOULD STATE TAXES BE LOWERED?

For many years North Carolina has had one of the lowest per capita incomes in the Union and one of the very highest income tax rates. In spite of this, the present legislature is giving serious consideration to increasing our taxes.

An editorial published in the NORTH CAROLINA MEDICAL JOURNAL for October, 1950, is still so pertinent that it is published again, with the single change of the governor's name.

* * *

The late Archibald Johnson, while he was editor of *Charity and Children*, was offered the editorship of a paper in another state at a \$1,000 a year increase in salary. Although this would have almost doubled his income—for a dollar then had full five times its present value—he declined the offer, and gave as his reason that it was worth \$1,000 a year to live in North Carolina.

While such spectacular examples of Tar Heel loyalty may be rare, there are many citizens living in North Carolina today who make a financial sacrifice to stay in this state. Reference to any of the recent tax guides will reveal that North Carolina has the second or third highest income tax rate in the Union; that only four other states have a sales tax as high; that only 12 other states have gasoline taxes as high; and that in all

but six other states the taxpayer is allowed to deduct his federal income tax in computing his income for state taxes.

In spite of this record, Governor Hodges is quoted as saying that higher taxes will probably have to be levied, in order to meet the state's rising budget. For many years Mr. Paul Leonard, secretary of the State's Merchants' Association, has contended—and few men have given more thought to the question than he—that our high state taxes are keeping new industries from moving into the state and are driving other industries out. Our legislators should remember that there is a law of diminishing returns.

Donald Adams, in the "Book Review Section" of the *New York Times*, recently extolled North Carolina's climate and the beauty of her scenery as unexcelled anywhere in the Union. Unfortunately, however, our citizens cannot live on air and beautiful scenery alone. Now that the state has set aside enough surplus to pay off its debt, the grievous tax burden now resting upon North Carolina citizens should be relieved to some extent, at least. Surely it is not fair to tax our own citizens for being loyal to their state.

* * *

NEW YEAR RESOLUTIONS

Despite the tendency to belittle New Year resolutions, there is much to be said in favor of an occasional inventory of one's failings and a corresponding resolve to overcome them so far as possible. It is natural to make these resolutions at the beginning of the new year.

The editorial staff of the NORTH CAROLINA MEDICAL JOURNAL begins the year 1955 with an acute sense of shortcomings in the past and with the hope of doing better in the future. One of the most trying and embarrassing experiences of the past year has been a number of failures to get the JOURNAL out on time. Long explanations and reasonably valid excuses could be offered—but instead the editorial staff and our publishers are together issuing two joint resolutions: (1) To do our level best to get out each issue on time—at least within the month of issue; and (2) to maintain the highest possible standards of medical journalism.

BULLETIN BOARD

COMING MEETINGS

Watts Hospital Medical and Surgical Symposium—Watts Hospital, Durham, February 9-10.

Fourth Annual Cancer Symposium sponsored by the Forsyth County Medical Society—Robert E. Lee Hotel, March 10.

North Carolina Rural Health Conference: Eastern Conference—Eastern Carolina Teachers College, Greenville, March 17; Western Conference—George Vanderbilt Hotel, Asheville, March 24.

Twenty-third Annual Venereal Disease Postgraduate Course—Tulane Medical School of Louisiana in New Orleans, January 31-February 4.

Southeastern Surgical Congress, Twenty-Fifth Anniversary Meeting, held in conjunction with the Atlanta Graduate Medical Assembly—Biltmore Hotel, Atlanta, February 21-24.

Annual Congress on Medical Education and Licensure—the Palmer House, Chicago, February 5-8.

Rural Health Conference—the Schroeder Hotel, Milwaukee, Wisconsin, February 24-26.

American College of Surgeons, Sectional Meeting—Nashville, Tennessee, April 4-6.

American Congress of Physical Medicine and Rehabilitation—Hotel Statler, Detroit, August 28-September 2.

NORTH CAROLINA STATE BOARD OF MEDICAL EXAMINERS

Dr. Gibbons Westbrook Murphy of Asheville has been elected to fill the unexpired term of Dr. James P. Rousseau of Winston-Salem on the North Carolina Board of Medical Examiners, according to Dr. Joseph J. Combs of Raleigh, secretary of the board. Dr. Rousseau, whose term was due to expire in July, 1957, resigned as of January 11 because of his position as president-elect of the Medical Society of the State of North Carolina.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Addressing the American Association for the Advancement of Science, in Berkley, California, last month, Dr. Joseph W. Beard, professor of experimental surgery at the Duke Medical School, reported three significant new discoveries regarding viruses as cancer-producing agents:

1. A Duke research team comprising Dr. Beard, Dr. D. Gordon Sharp, Dr. Edward A. Eckert, and Dr. Dorothy Beard for the first time has purified a true cancer virus which causes erythromyeloblastic leukemia, a disease closely resembling human leukemia.

The Duke team isolated and concentrated the virus almost four years ago, but now they have definitely purified it. The research tool for establishing purity of the virus preparations is an immune serum, artificially produced in chickens, which neutralizes the virus.

2. The researchers also have "proved conclusively" that this virus has enzyme activity which undoubtedly plays a major part in producing cancer.

3. They have proved further that the virus contains tissue which is indistinguishable from the normal tissue of the invaded cell.

These discoveries greatly broaden the knowledge of the nature of viruses and probably will reopen investigation of other viruses believed to have enzyme activity.

CONFERENCE ON RURAL HEALTH

The Committee on Rural Health of the Medical Society of the State of North Carolina has scheduled conferences on Rural Health to be held in the eastern and western regions of the state respectively. The eastern conference will be held at Eastern Carolina Teachers College in Greenville on March 17, and the western conference at the George Vanderbilt Hotel in Asheville on March 24.

FOURTH ANNUAL CANCER SYMPOSIUM

The fourth annual cancer symposium of the Forsyth County Medical Society will be held on the afternoon and evening of March 10 at the Robert E. Lee Hotel in Winston-Salem, according to an announcement by Dr. George W. James, chairman of the society's cancer committee.

Four prominent speakers will participate in the program, which will deal with cancer of the gastrointestinal tract. They are: Dr. Arthur Purdy Stout, New York City; Dr. Albert Andreson, New York; Dr. Edward W. Chamberlain, Atlanta; and Dr. Claude E. Welsh, Boston.

1955 NORTH CAROLINA MARCH OF DIMES AGAINST POLIO

The polio attack rate in North Carolina in the year just ended was about 28 per cent lower than the national average, according to provisional reports. Nationwide, the number of cases reported in 1954 was the third highest on record.

In 1953, when 926 polio cases were reported, the attack rate in North Carolina was about the same as the national average. It is impossible to predict where and when polio epidemics will strike, which underlines the need for more effective control measures.

Evaluation of the Salk vaccine, administered to 440,000 U.S. children, in the largest medical experiment of its kind ever conducted, is now in progress. Announcement of the vaccine's effectiveness will be made in the Spring of 1955.

During the field trials last spring about 2,900 children in the state of North Carolina were inoculated with the Salk vaccine.

EDGECOMBE-NASH MEDICAL SOCIETY

Dr. William Anlyan, associate in surgery, Duke Hospital, addressed the Edgecombe-Nash Medical Society in November. His subject was "Pancreatitis." There was no scientific program at the December meeting.

FORSYTH COUNTY MEDICAL SOCIETY

Dr. Martin D. Young, science director of the laboratory of tropical diseases, Columbia, South Carolina, spoke on "The Role of the Public Health Service in Tropical Disease in Foreign Countries" at the regular monthly meeting of the Forsyth County Medical Society held in Winston-Salem on January 11.

NEWS NOTES

Dr. Richard L. Masland has announced the association of Dr. Robert R. J. Strobos in the practice of neurology, with offices in the Bowman Gray School of Medicine, Winston-Salem.

Dr. Archie Y. Eagles has announced that Dr. Samuel J. Calvert is now associated with him in the practice of internal medicine in Ahsoskie.

SOUTHEASTERN SURGICAL CONGRESS

The twenty-fifth anniversary meeting of the Southeastern Congress will be held concurrently with the Atlanta Graduate Medical Assembly at the Biltmore Hotel in Atlanta, February 21-24.

The program has been built around the first scientific program of the Congress, which was presented in Atlanta in 1931. Many of the original subjects will be presented again, showing the progress which has been made during the past 25 years. Some of the original speakers will be present. In addition to these papers, a variety of surgical papers will be presented by authorities in the field.

Panel discussions will be held on the following subjects:

Monday, 1:30 p.m.

"Cancer of the Breast"—Dr. Harry H. Kerr, Washington, D. C., moderator.

Tuesday, 4:30 p.m.

"Diseases of the Colon"—Dr. Edwin Ransdell, White Plains, moderator.

Wednesday, 4:30 p.m.

"Lung Tumors"—Dr. O. C. Brantigan, Baltimore, moderator.

Thursday, 12:30 p.m.

"Venous Thrombosis"—Dr. Alton Ochsner, New Orleans, moderator.

An excellent program has been prepared by the Atlanta Graduate Medical Assembly. All guests are privileged to attend both programs.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

William W. Hetherington has been named managing publisher of *Today's Health* magazine, the official consumer publication of the American Medical Association.

Dr. George F. Lull, secretary-general manager of the A.M.A., announced the creation of the position and Hetherington's appointment. He said: "It is contemplated that the magazine, with more than 350,000 circulation, will be expanded and developed to further attain the basic objective of publishing a modern, authentic, effective and popular publication for the general public. Mr. Hetherington's duties will include the coordination of the editorial, circulation and advertising section of the publication."

Dr. Lull also announced a six-man editorial board for *Today's Health*: Drs. Walter E. Vest, Huntington, West Virginia; Julian P. Price, Florence, South Carolina; Austin Smith, editor of the *Journal of the American Medical Association*; George F. Lull; Mr. Leo Brown, director of the A.M.A.'s Department of Public Relations, and Dr. W. W. Bauer, chief editor of *Today's Health* and chairman of the editorial board.

Eight-Day Cruise

An eight-day cruise to Bermuda and Nassau has been arranged for physicians and their wives following the A.M.A. meeting at Atlantic City in June.

All space is being held for the A.M.A., and reservations should be made immediately. For further information write W. M. Maloney, Chicago, Burlington and Quincy Railroad, 105 West Adams Street, Chicago.

New Booklets on Community Health Planning

With an eye to better health at the community level, A.M.A.'s Council on Medical Service has prepared two attractive new pamphlets dealing with health leadership and community health planning.

(1) "The Key to Community Health" describes community health councils—offers how-to-do-it information on organizing and operating them, with helpful hints for mobilizing community leaders to action.

(2) "Main Line Route" was designed primarily for woman's auxiliaries.

Both booklets may be obtained by writing directly to the Council.

* * *

Dr. Judd to Speak at Rural Health Conference

A physician-statesman will be the headline speaker at the A.M.A.'s tenth National Rural Health Conference February 24-26 at the Schroeder hotel, Milwaukee, Wisconsin. The Honorable Walter H. Judd, M.D., congressional representative from Minnesota, will speak on "Rural Health and World Peace" at the Friday evening banquet.

* * *

New "March of Medicine" Series Slated

The "March of Medicine" television program once again will bring to the American people the latest reports of medical progress across the nation. The first program in the spring 1955 series will be carried over the National Broadcasting Company's television network on Sunday, February 26.

Further details will be announced later. Watch your local newspapers for time and station of the shows in your area.

* * *

Award to "March of Medicine" Mental Illness Show

In recognition of the "outstanding contribution to public understanding of the problem of mental illness" the American Medical Association and Smith, Kline & French Laboratories recently received a citation from the National Association for Mental Health. The award was for the "March of Medicine" telecast entitled "Search for Sanity" which was presented by Smith, Kline & French and the A.M.A. October 31 over the NBC-TV network. This program reported on the care and treatment of mental patients and on research projects now being conducted in the field.

Dr. Leo H. Bartemeir, chairman of A.M.A.'s Council on Mental Health, accepted the award on behalf of the A.M.A. in Philadelphia.

* * *

A.M.A. Issues New Catalogue of Health Booklets

For a healthier 1955, the A.M.A.'s Bureau of Health Education presents its new catalogue of "Publications About Your Health." Listing hundreds of new pamphlets on personal and family health problems, copies of these booklets may be secured for distribution to your patients through A.M.A.'s Order Department.

New titles include—"For Safer Cycling," which describes a community program for teaching children safe bicycling rules; "Is He Ready for Kindergarten?" outlining the points parents should watch for in the physical, mental and emotional development of their pre-school children; "The New Contact and Corneal Lenses," discussing the new type lenses and the types of people who can safely wear them; "Joe's Nervous Breakdown," explains why and how breakdowns occur and what to do about them.

AMERICAN COLLEGE OF SURGEONS

Scientific reports, symposiums, hospital clinics, panel discussions, and films on current surgical problems will be presented by eminent surgeon-teachers at the three-day Sectional Meeting of the American College of Surgeons in Nashville, Tennessee, April 4 through 6. All medical representatives are invited to attend. Dr. James A. Kirtley, Jr., Nashville, is chairman of the Local Committee on Arrangements. Headquarters for this meeting will be the War Memorial Auditorium.

Subjects to be covered include an extensive symposium on Management of Auto Accident Victims, with discussions by representatives of all specialties likely to be involved in such cases, panel discussions on Bile Duct Injuries and Peptic Ulcers, Cardiovascular Surgery, and a Symposium on Cancer.

Dr. Kirtley will preside over the opening session, April 4, when Richard B. Cattell, Boston, will speak on Biliary Tract Surgery, William A. Altmeir, Cincinnati, on Abuses of Antibiotics, and John M. Waugh, Rochester, Minnesota, on Various Types of Gastrectomy.

Dr. George K. Carpenter, Nashville, will preside over the afternoon symposium on Management of the Automobile Accident Victim. Speakers follow: Robert H. Kennedy, New York, Moderator; Moore Moore, Jr., Memphis, "Immediate Management of the Accident Victim"; William F. Meacham, Nashville, "Neurological Injuries"; Harwell Wilson, Memphis, "Abdominal Injuries"; David H. Waterman, Knoxville, "Thoracic Injuries"; Charles E. Haines, Jr., Nashville, "Urological Injuries"; Robert C. Robertson, Chattanooga, "Skeletal Injuries"; Greer Ricketson, Nashville, "Injuries Requiring Plastic Repair."

Dr. Willard H. Parsons, Vicksburg, will preside over the morning session on April 5, when surgical films will be shown, followed by a report by Dr. Michael E. DeBakey, Houston, on "Esophageal Varices."

Dr. John C. Burch, Nashville, will preside over the two afternoon programs: (1) panel discussion on Childbirth Injuries: moderator—Howard C. Taylor, Jr., New York; collaborators—John C. Weed, New Orleans; Howard Ulfelder, Boston; Frank E. Whitacre, Nashville. (2) symposium on Vascular Surgery: Michael E. DeBakey, Houston; Frederick W. Cooper, Jr., Emory University; George H. Yeager, Baltimore; Harris B. Shumacker, Jr., Indianapolis.

Dr. Alfred Blalock, president, American College of Surgeons, will preside at the dinner meeting on April 5, at which Dr. Paul R. Hawley, the director, will speak on the work of the College.

On the morning of April 6, Dr. Pat R. Imes, Louisville, will preside over the following series of reports: R. Kennedy Gilchrist, Chicago, and Frederick A. dePeyster, Chicago, "Safeguards in Major Abdominal Surgery of the Aged"; H. Thurston Whitaker, Vicksburg, "Modern Indications for Tracheotomy"; W. E. Kittredge, New Orleans, "Congenital Anomalies of the Urogenital Tract"; Alfred Blalock, Baltimore, "Some Debatable Points in Cardiovascular Surgery"; Harry W. Hale, Jr., Buffalo, "The Thoracoabdominal Approach to Lesions of the Upper Abdomen"; Rudolf J. Noer, Louisville, "Diverticulitis"; Howard Ulfelder, Boston, "The Management of Cystocele and Prolapse."

Dr. Leonard W. Edwards, Nashville, will preside over a symposium on cancer and a panel discussion on peptic ulcer: Cancer: Hayes E. Martin, New York, "Surgical Treatment for Cancer of the Floor of the Mouth, Gum and Anterior Tongue"; Norman L. Higinbotham, New York, "Malignant Transfor-

mation on Benign Bone Tumors"; Clarence E. Gardner, Durham, "The Treatment of Carcinoma of the Breast."

Peptic Ulcer: moderator—Robert M. Zollinger, Columbus; collaborators—Harry W. Hale, Jr., Buffalo; Stanley O. Hoerr, Cleveland; Rudolf J. Noer, Louisville.

Information about this or other Sectional Meetings may be obtained from Dr. H. Prather Saunders, Associate Director, American College of Surgeons, 40 East Erie Street, Chicago 11, Illinois.

HARVARD UNIVERSITY SCHOOL OF PUBLIC HEALTH

Public Health Scholarships

Scholarships for the academic year 1955-1956 will be granted to individuals of high professional promise in awards ranging from part tuition to tuition plus a stipend, according to the qualifications and financial needs of the applicants. The scholarship funds are limited and are primarily intended for citizens of the United States.

Scholarship applicants must be eligible for admission to the school as a candidate for one of the following degrees: Master of Public Health, Doctor of Public Health, Master of Science in Hygiene, Doctor of Science in Hygiene, Master of Industrial Health.

Scholarships are available to physicians who wish to obtain postgraduate education in the field of public health or in one of the basic sciences related to public health.

A catalogue of the school, admission and scholarship applications, and further information may be obtained by writing the Secretary, Harvard School of Public Health, 55 Shattuck Street, Boston 15, Massachusetts.

Scholarship applicants must return completed admission and scholarship applications to the Harvard School of Public Health by March 1, 1955. Scholarship awards will be announced May 1, 1955.

AMERICAN RED CROSS

Presentation of a 14½-minute color film with sound, "Prescription for Life," was made to the American National Red Cross for education of the public on the organization's blood program December 9 at a reception at the Hotel Statler, Washington, D. C.

Sponsored by E. R. Squibb and Sons, Division of the Olin-Mathieson Chemical Corporation, the film was presented by John C. Leppart, Executive Vice President of the Olin-Mathieson Corporation. Dr. David N. W. Grant, director of the Red Cross Program, was chairman of the ceremonies, and Ellsworth Bunker, American Red Cross President, expressed the appreciation of the organization in his acceptance remarks.

"Prescription for Life" was produced by the William J. Ganz Company, of New York City. Distribution is on a loan basis from the four American Red Cross Area offices through local Red Cross chapters. The purchase price is \$50.

JOHN AND MARY R. MARKLE FOUNDATION

Markle Fund Grants

Medical schools in the United States and Canada have received a total of \$3,229,000 for aid of their faculty members from the John and Mary R. Markle Foundation through its Scholar in Medical Science program, John M. Russell, executive director and vice president of the fund announced in the annual

report issued recently. Since the program began in 1948, 60 medical schools have shared this sum, given to help selected young faculty members on their staffs to become established in teaching and research.

Through a grant of \$150,000 to the Association of American Medical Colleges, the Foundation during the year supported research on medical students. One of the studies, on the cost to the student of attending medical school, shows that \$9,200 is the sum spent on the average for four years, though the amount varies greatly from one school to another, and within any school from one student to another. Other Association studies in progress under the Foundation grant deal with women medical students and the extent to which they practice medicine after graduation, the success of older students in medical school and the drop-out rate for individual schools and reasons for withdrawal.

(BULLETIN BOARD CONTINUED ON PAGE 38)

The Month in Washington

Because this is a new Congress and under new leadership, a number of new bills can be expected in the health field. But the Democrats also can be expected to devote a vast amount of time to health legislation that was previewed last session by the Republicans.

In fact, one of the more prominent bills on the list, that providing federal reinsurance of health insurance plans, was subjected to lengthy hearings before it finally met defeat in the House late in the last session. So thoroughly was it dissected then that it will be surprising if the friends of reinsurance can find anything else favorable to say about it, or its critics can find anything else wrong with it. How this Republican bill will fare in Democratic committees now is one big question.

There is always the possibility, of course, that some of the major bills to be presented again will be so amended that new decisions will be called for. For example, the administration's experts all fall have worked tirelessly to make the reinsurance bill more palatable.

Like the resinsurance bill, the proposal to revamp the procedure for distributing public health grants to states was well worked over last session. It passed the House, but the Senate committee was unable to untangle all the knots it discovered, so there was no final action. This, too, is up again this year, labeled as difficult and touchy but nonpartisan.

Another well advertised bill coming up for action is that to set up a program of contributory health insurance for federal employees. Last session a Senate committee held a one-day hearing on this bill, admittedly merely to get the proposition "on the record" so it could be freely discussed between Congresses. A task force from the Civil Service Commission has been trying to hammer out a more workable version of the bill, and has found the task a formidable one. But despite the complications, Congress will be asked to enact some bill of this type.

Although the bill definitely is of Republican origin, there is no reason to expect that it will receive a hostile reception from the Democrats in either House. It is generally accepted as a too-long delayed attempt to bring the federal government into line with private industry.

The bill for expanding medical care for military dependents has about the same history. After months of planning and conferences, bills were introduced last year in House and Senate to get the idea out into the open for the benefit of Congress and the public. Because the plan is so highly controversial, however, no hearings were held last session. The same bill is going before Congress again.

Here the fundamental issue is whether military hospitals and uniformed physicians shall supply the preponderance of this service to dependents, or the dependents shall be treated largely by civilian physicians and in civilian hospitals.

Last session the Defense Department prepared the draft of a bill to set up a number of military medical scholarships. Because bills originating in one department that might affect another first must be submitted to the latter for comment, this bill was turned over to Mrs. Hobby's Department of Health, Education, and Welfare. There it rested until after Congress adjourned. The Eighty-Fourth Congress will be asked to enact the bill, possibly as an alternative to extending the Doctor Draft, which is scheduled to expire next July 1.

Efforts will be made, but not necessarily with the Eisenhower administration's help, to enact some sort of legislation for federal guarantee of hospital mortgage loans. This subject was gone into in great detail last session by Mr. Wolverton's House Interstate and Foreign Commerce Committee, but the

committee finally turned down Mr. Wolverton and refused to report out the bill for action. It had widespread labor support last year, but was opposed by the A.M.A. as discriminatory, in that it would offer more assistance to closed-panel practice than to other forms of medical practice.

Indications are that Mrs. Hobby's department will sponsor legislation to aid medical schools, a subject that was not taken up in the last Congress, but that attracted considerable attention in years past.

BOOK REVIEWS

What You Should Know About Mental Illness. By Orin Ross Yost, M.D., Medical Director, Edgewood Sanitarium Foundation, Orangeburg, South Carolina. Foreword by Nolan D. C. Lewis, M.D. Introduction by Leland E. Hinsie, M.D. and a Note by Norman Vincent Peale, D.D. 105 pages. Price, \$3.50. New York: Exposition Press, 1954.

In this little book Dr. Orin Yost writes in non-technical language a summary of the present status of mental illness. The book is divided into three parts: (1) "The Mind in the Making," (2) "Mental Illness and Its Treatment," (3) "Mental Illness: A Public Responsibility."

The discussions of psychosomatic illness, alcoholism and epilepsy are particularly well done. The final chapter, on "Psychiatry and Religion," should be helpful to pastors who want to help their members with various problems that are apt to confront him in pastoral counseling.

The book is written primarily for the layman, but might be helpful to a physician in suggesting explanations of various mental disorders that are apt to be asked for by patients and their relatives. The author is to be commended for scrupulously abstaining from suggesting self-medication for readers of the book.

Galen of Pergamon. By George Alfred Leon Sarton. Clendening Lectures on the History and Philosophy of Medicine, Series 3. 112 pages. Price, \$2.50. Lawrence, Kansas: University of Kansas Press, 1954.

This little book is the third series of the Logan Clendening lectures on the history and philosophy of medicine. It sketches briefly, but adequately, the life of this remarkable man, who dominated medical practice for more than 14 centuries.

Dr. Sarton paints his word picture of Galen as Cromwell's portrayer was enjoined to do, "warts and all." Those who are interested in medical history will find this book quite helpful.

BOOKS RECEIVED

Patologia del Estomago Operado: Segundo Congreso Argentino de Gastroenterologia. Buenos Aires: Editorial Universitaria.

Emotions and Bodily Changes. By Flanders Dunbar, M.D., Med. Sc.D., Ph.D. Ed. 4, with supplementary material and additional bibliography. New York: Columbia University Press, 1954.

Diagnosis and Treatment of the Acute Phase of Poliomyelitis and Its Complications. Edited by Albert G. Bower, M.D. Baltimore: The Williams and Wilkins Company, 1954.

Lenkemia Research: Ciba Foundation Symposium. Edited by G. E. W. Wolstenholme and Margaret P. Cameron. Boston: Little, Brown and Company, 1954.

The Kidney: Ciba Foundation Symposium. Arranged jointly with the Renal Association. Edited by A. A. G. Lewis, M.D., of the Renal Association, and G. E. W. Wolstenholme of the Ciba Foundation, assisted by Joan Etherington. Boston: Little, Brown and Company, 1954.

Peripheral Circulation in Man: A Ciba Foundation Symposium. Edited by G. E. W. Wolstenholme and Jessie S. Freeman, assisted by Joan Etherington. Boston: Little, Brown and Company, 1954.

Primer of Allergy: A Guidebook for Those Who Must Find Their Way Through the Mazes of This Strange and Tantalizing State. By Warren T. Vaughan, M.D. Ed. 4, revised by J. Harvey Black, M.D. St. Louis: The C. V. Mosby Company, 1954.

The Concept of Schizophrenia. By W. F. McCauley, M.D. New York: Philosophical Library, 1954.

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This Pace is Not Killing Us. By J. I. Rodale. Emmaus, Pennsylvania: Rodale Books, Inc., 1954.

Handbook of Medical Treatment. By Henry D. Brainerd, M.D., and others. Ed. 4. Los Altos, California: Lange Medical Publications, 1954.

Review of Medical Microbiology. By Ernest Jawetz, Ph.D., M.D., Joseph L. Melnick, Ph.D., and Edward A. Adelberg, Ph.D. Los Altos, California: Lange Medical Publications, 1954.

Needed Research in Health and Medical Care: A Bio-Social Approach. By Cecil G. Sheps, M.D., M.P.H., and Eugene H. Taylor, M.D., M.P.H. Chapel Hill: The University of North Carolina Press, 1954.

The Scourge of the Swastika: A Short History of Nazi War Crimes. By Lord Russell of Liverpool. New York: Philosophical Library, 1954.

The changes in character of individual diseases from time to time is in itself an interesting story. Acute rheumatism today, for example, compared with a generation ago. Acute and severe inflammation of the heart valves, from having been very common, is now much less so, and rheumatic pericarditis has become a rarity. What has happened to the virulent form of scarlet fever that was so common and so lethal? And why?—seeing that we know as little about its causation or its treatment today as we did when this form of the disease was common.—Horder, L.: *Fifty Years of Medicine*, New York, Philosophical Library, 1954, p. 40.

Classified Advertisements

POSITION OPEN: PSYCHIATRIST

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BULLETIN BOARD

(CONTINUED FROM PAGE 36)

CONGRESS ON MEDICAL EDUCATION AND LICENSURE

What part television can play in future postgraduate medical education will be one of the featured attractions of the fifty-first annual Congress on Medical Education and Licensure to be held February 5-8 at the Palmer House, Chicago. The meeting will be sponsored by the A.M.A.'s Council on Medical Education and Hospitals in cooperation with the Federation of State Medical Boards of the United States and the Advisory Board for Medical Specialties.

The first of a series of annual work-shop conferences in the field of postgraduate medical education will be devoted to the potential use of television during the all-day session February 5. Open meetings of the Advisory Board and the Federation will be held February 6.

The place of legal and forensic medicine in undergraduate medical education and the future status of the internship in the medical education program will be discussed during the A.M.A. Council's program February 7. The February 8 sessions will be conducted by the federation.

More than 500 medical educators, officers and members of the state licensing boards and others interested in postgraduate medical education are expected to attend the four-day conference.

AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION

The thirty-third annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held August 28-September 2, 1955, inclusive, at the Hotel Statler, Detroit.

Scientific and clinical sessions will be given August 29, 30, 31, September 1 and 2. All sessions will be open to members of the medical profession in good standing with the American Medical Association.

In addition to the scientific sessions, annual instruction seminars will be held. These lectures will

be open to physicians as well as to therapists, who are registered with the American Registry of Physical Therapists or the American Occupational Therapy Association.

Full information may be obtained by writing to the executive secretary, Dorothea C. Augustin, American Congress of Physical Medicine and Rehabilitation, 30 North Michigan Avenue, Chicago 2, Illinois.

* * *

To stimulate interest in the field of physical medicine and rehabilitation, the American Congress of Physical Medicine and Rehabilitation will award annually a prize for an essay on any subject relating to physical medicine and rehabilitation. The contest, while open to anyone, is primarily directed to medical students, interns, residents, graduate students in the pre-clinical sciences and graduate students in physical medicine and rehabilitation.

Manuscripts MUST BE in the office of the American Congress of Physical Medicine and Rehabilitation, 30 N. Michigan Ave., Chicago 2, not later than June 1, 1955.

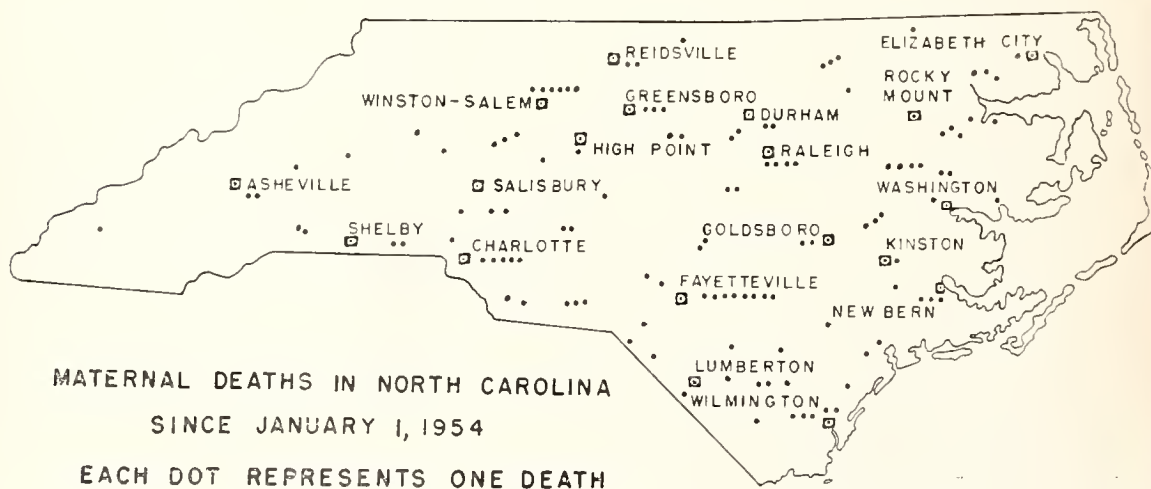
U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

The twenty-third Postgraduate Course on Venereal Disease will be given at Tulane Medical School of Louisiana in New Orleans from January 31 through February 4, 1955, co-sponsored by the Division of Graduate Medicine of Tulane University and the Public Health Service, U. S. Department of Health, Education, and Welfare.

The one-week course is designed to acquaint the practitioner with the latest developments in diagnosis, treatment, and management of the venereal diseases. No tuition will be charged. Applications for admission should be made immediately to Dr. Clifford Grulee, Jr., Director of the Division of Graduate Medicine of Tulane University of Louisiana, 1430 Tulane Avenue, New Orleans, Louisiana. The course is open to any physician either in civil or military practice anywhere in the United States.

The faculty for this course will be drawn from various universities, the U. S. Public Health Service, and outstanding authorities in the field. This course is accredited by the American Academy of General Practice.



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Medical Journal



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THROMBOPLASTIC COMPLICATIONS OF PREGNANCY
—DONNELLY AND KEARNS

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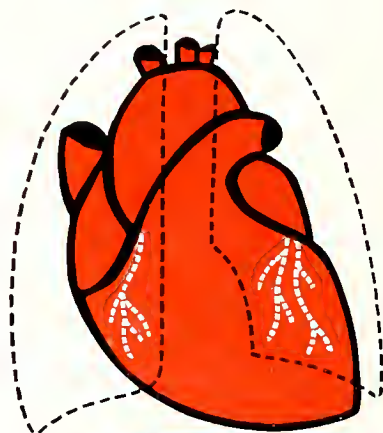


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THROMBOPLASTIC COMPLICATIONS OF PREGNANCY

JAMES F. DONNELLY, M.D.

and

PAUL R. KEARNS, M.D.

WINSTON-SALEM

Obstetricians have long realized that serious maternal complications frequently follow premature separation of the placenta. These complications include renal suppression, persistent shock, ruptured uterus (Couvelaire uterus), and immediate or delayed postpartum hemorrhage in the presence of apparently normal coagulation. Recently, Page⁽¹⁾ has suggested that a number of grave maternal complications associated with severe premature separation of the placenta may all be related to the escape of biologically active products from the uterine cavity into the maternal blood stream. Some of the major complications which he lists are: disseminated fibrin emboli, lower nephron nephrosis, and afibrinogenemia. This paper will be limited to the last complication, as it has received the most attention recently.

In 1901 DeLee⁽²⁾ observed an obstetric patient who had a fatal hemorrhage related to a defect in her blood clotting mechanism following the complication of premature separation of the placenta. Since that time numerous observations of a similar nature have been reported. In 1922 Willson⁽³⁾ suggested that a circulating placental toxin might be responsible for this state of incoagulability of the blood; and in 1936 Dieckmann⁽⁴⁾ observed a prolonged bleeding time with a marked decrease in blood fibrinogen levels in patients with premature separation of the placenta. Moloney⁽⁵⁾, in 1949, first reported the use of fibrinogen factor in ad-

dition to whole blood transfusion in the treatment of this problem.

Sequence of Events

This hemorrhagic state is characterized by faulty blood coagulation, with either failure of clotting or the formation of an unstable clot, reduction in blood fibrinogen, and prothrombin concentrations usually above hemorrhagic levels. This complication has been observed following premature separation of the placenta, amniotic fluid embolism, severe acute toxemia, and long-standing intrauterine fetal death. It has been postulated that the following sequence of events occur:

1. Thromboplastin is released into the maternal circulation.
2. Intravascular fibrin is formed and multiple fibrin emboli occur throughout the lesser pulmonary arterial circulatory system and in the small arteries and arterioles of the brain, liver, spleen, and kidneys.
3. In experimental animals, at least, this process results in dyspnea, shock, coma, and/or convulsions.
4. Either sudden death occurs or the animal recovers.
5. If recovery takes place, fibrinogen has been depleted from the blood stream and clotting will not occur.
6. Bleeding may occur from all sites of injury in addition to mucous membrane surfaces and skin.

Evidence that this sequence of events probably does occur is found in the following observations:

1. Placental decidua is a particularly rich source of thromboplastin⁽⁶⁾.

Read before the Section on Obstetrics and Gynecology, Medical Society of the State of North Carolina, Pinehurst, May 5, 1954.

From the Department of Obstetrics and Gynecology, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

2. Thromboplastin has been demonstrated to be the potent pathologic factor in placental perfusates⁽⁶⁾.

3. Injections of placental extracts or of thromboplastin obtained from other sources into experimental animals produce identical clinical and pathologic pictures^(7,8).

4. The injection must be made intravascularly in order to produce these changes^(7a,8).

5. Following the injection of a lethal dose of placental extract into the animal, the peripheral circulation stops, respiration then ceases, and finally cardiac pulsations cease^(6,8,9).

6. Following sublethal injections the peripheral circulation slows or stops, and then the blood begins to flow again^(9a,10). Thromboplastin labeled with radioactive iodine has been injected intravenously in animals and has disappeared rapidly from the blood stream. It was found to be concentrated in various organs, especially the liver, lungs, and spleen⁽¹¹⁾.

7. The pathologic lesion found in animals that die immediately is multiple fibrin emboli of the lesser arterial circulation, especially of the lungs and liver. If the animals survive the immediate reaction, subsequent findings include necrosis of the liver and focal perivascular hemorrhages. There is no evidence of fibrin emboli in these animals^(8,9a,12).

8. Surviving animals have a depletion of plasma fibrinogen for several hours and during this period are refractory to further injections of placental extract. This refractory state has been shown to be due to fibrinogen depletion^(9a,13). Sensitivity to the extract may be restored by artificially replacing the plasma fibrinogen^(7b,13,14).

9. Auto-extraction of placental thromboplastin into the maternal circulation can be accomplished in animals by trauma to the placenta. This produces the previously described clinical and pathologic pictures⁽¹²⁾.

10. A means of release of thromboplastin into the maternal circulation has been proposed for the human being^(10,12,14,15,16).

11. The clinical and pathologic picture in the human is similar to that noted in experimental animals⁽¹⁶⁾.

12. Infusion of fibrinogen has corrected the fibrinogen defect and returned the clotting mechanism to normal in both human beings and experimental animals^(14,17).

Clinical Material

The 1,600 maternal deaths currently on file with the Committee on Maternal Welfare were completely reinvestigated in an effort to study those patients who showed unusual hemorrhage without evidence of clotting. Of the 389 patients who died from hemorrhage, 8 had persistent bleeding from the uterus and/or other surfaces. In all 8 cases failure of blood clotting was mentioned one or more times. Three of these patients had uncomplicated postpartum hemorrhage with none of the antecedent factors noted in the literature. Four had severe preeclampsia with varying degrees of premature separation of the placenta, and one had a mild preeclampsia of one month's duration with an anemia of unknown severity. The death certificates of 3 of these patients included some notation regarding the failure of the blood to clot. Although 4 of these cases are strongly suggestive of fibrinogen deficiency, there is no absolute evidence for the diagnosis of hypofibrinogenemia.

Two additional patients who presented laboratory evidence suggestive of fibrinogen depletion died from causes other than hemorrhage.

Case 1

The patient was a 30 year old Negro woman (Para III) who was admitted to the hospital with a history of incomplete abortion, suspected of being criminal. On admission she was febrile, with a pulse rate of 128 and blood pressure of 90 systolic, 60 diastolic. Pelvic examination at this time revealed that the placenta was still within the uterine cavity and apparently unseparated. She was returned to bed and treated with whole blood transfusions and continuous intravenous Pitocin drip. Four hours later her general condition had improved considerably, but because of severe uterine contractions, the sterile pelvic examination was repeated. At this time the placenta was found lying in the cervical os and was removed. The uterus was not invaded. Immediately following the removal of the placenta a clot observation test was found to be normal. Seven hours after admission uterine bleeding became excessive and shock developed. Continuous intravenous Pitocin was started again, and the patient was given 3 units of whole blood. At this time abnormal bleeding occurred from all puncture sites, and the clot observation test was repeated. This blood failed to clot at room temperature, even after a 24-hour period. The patient was treated vigorously with large amounts of whole blood, and dilatation and curettage was performed. At the time of this procedure, routine catheterization revealed the urine to be black, and subsequent analysis revealed 20 to 30 red blood cells per high power field. Following the dilatation and curettage the uterus and vagina were tightly packed, but the packing became rapidly saturated and no evidence of clotting was noted. The packing was removed and a small, bleeding laceration of the anterior vaginal fornix was sutured. Further packing was unnecessary. Following this procedure the patient vomited, and the vomitus was

noted to be of the consistency of coffee grounds. All previous crossmatches were rechecked and found to be compatible. A 3 tube clotting test at this point was found to be normal, as were all subsequent clotting tests.

Postoperatively the patient recovered from her immediate difficulty. The urine continued to be hemorrhagic and positive for albumin. The diagnosis of lower nephron nephrosis was made and the patient placed on restricted fluid intake, fat emulsion diet, antibiotics, and other supportive therapy. Mild icterus developed on the fourth postoperative day, and on the sixth paralytic ileus developed. There was evidence of increasing uremia, and the patient died on the tenth day after her hospital admission.

Case 2

This patient (Para II) was 34 years old at the time of her death. Her prenatal care had been ideal and uncomplicated. At term she began to have intermittent labor-like pains without any evidence of cervical dilatation. After 48 hours of this prodromal type of uterine contractions, she was admitted to the hospital and received the routine preparation for labor. A sterile pelvic examination revealed the cervix to be 3 cm. dilated, with the presenting part at a plus 2 station. The membranes were ruptured artificially, and during the succeeding four hours she received 8 doses of Pitocin intramuscularly. Active labor became established approximately eight hours after the membranes were ruptured, and the patient was sedated with Demerol and scopolamine. Several hours later she was considered to be normal in all respects except that she had a rather bright red color and appeared irrational. This was attributed to sedation. The temperature, blood pressure, fetal heart beat, and other findings were all within normal limits. Shortly thereafter a clonic, generalized convulsion began, and was followed by coma persisting until her death. There were no localizing signs present at this time. She was seen immediately by her physician, who performed a vaginal examination and noted that she was in the second stage of labor. In view of the fact that the mother appeared to be in extremis, a rapid mid-forceps delivery was performed, resulting in the birth of an infant which lived for eight hours. Autopsy on the infant was essentially negative. The mother died sometime during the delivery. At no time had any bleeding been noted.

An exhaustive postmortem study of the patient was made. No abnormalities were noted upon gross examination. The placenta was intact, and no lacerations or other injuries of the uterus were noted. On microscopic study the only positive findings were restricted to the lungs. The tissue of the lungs was examined under hematoxylin and eosin stains in addition to lipid stains, and the following comments were made: "Some of the blood vessels contained numbers of well preserved erythrocytes, while others are either empty or have what appear to be hemolyzed red cells present. The reactions in some of the vessels including the presence of the granulocytic and lymphocytic leukocytes in the presence of macrophages may be due to an embolic phenomenon which does not show up with the routine hematoxylin-eosin stain. Lipoid stains show these vessels to contain a moderate amount of lipoid material indicating fat emboli probably of amniotic fluid origin."

During the autopsy it was noted that the patient's blood failed to clot. As a consequence a number of studies were performed on the blood.

1. Clot observation

Several clean test tubes were filled with the patient's blood and incubated at room tempera-

ture as well as at 37 C. No coagulation was observed at any time at either temperature.

2. Patient's plasma plus normal serum

Plasma was separated from the patient's blood, added to normal serum from the blood bank plus calcium, and incubated at room temperature as well as at 37 C. No coagulation occurred in any of these tubes.

3. Normal plasma plus patient's plasma

Oxalated plasma from blood withdrawn from the blood bank was added to the patient's plasma, sufficient calcium ion was incorporated, and the mixture was incubated at 37 C. Clotting occurred within several minutes, retracted firmly, and remained firm for the one-hour period during which it was observed.

4. Patient's plasma plus normal blood clot

A presumably normal blood clot of several days age from the blood bank was placed in a container containing the patient's plasma. There was evidence that the clot was beginning to dissolve within one hour, and complete dissolution occurred in 12 hours.

From the preceding information the pathologist concluded that the patient died as a consequence of an anaphylactoid reaction from amniotic fluid embolism, and suggested that as a consequence of the release of large amounts of material with high thromboplastin activity into the maternal blood stream, depletion of fibrinogen from the maternal blood stream occurred. The intact placenta and decidua, the fact that the membranes had been ruptured, and the meager evidence obtained on autopsy renders serious doubt as to the cause of death. Failure of blood to clot at the autopsy table is not uncommon, and has been reported previously by Mole⁽¹⁸⁾. On the other hand, the blood studies in this case would clearly indicate that the clotting defect was due to a deficiency of fibrinogen rather than to any other known cause.

Comment

Numerous reports of patients with bleeding secondary to depletion of fibrinogen have appeared in the literature, suggesting that this is a fairly common complication. Of the 389 patients who died from hemorrhage studied by the Committee on Maternal Welfare, only 8 presented any evidence of failure of the clotting mechanism. Two other patients, neither of whom died from hemorrhage, were found to show laboratory evidence of hypofibrinogenemia. In the first case, the depletion was temporary and the diagnosis depended entirely upon one observation. The cause of death in the second case remains unknown, and the patient never bled abnormally. The remaining 8 cases selected by the Committee for study were based upon the clinical observation that the

blood failed to clot. In 3 of these, and possibly 4, the antecedent conditions necessary for fibrinogen depletion were apparently absent. This complication would seem to be uncommon, therefore, and should not lead the physician to assume that every case of uncontrollable bleeding is related to a coagulation defect.

Diagnosis

So far the only proven cases of hypofibrinogenemia in the literature have been associated with severe premature separation of the placenta, amniotic fluid embolism, long-standing intrauterine fetal death, and occasionally, severe toxemia of pregnancy. In the presence of any of these conditions, the physician should always consider the possibility of hypofibrinogenemia in his therapeutic plan. Any patient with one of the preceding complications who bleeds excessively or in whom there is poor or absent clotting, hypofibrinogenemia should be strongly suspected.

In view of the necessity for a rapid diagnosis, some simple confirmatory test is desirable. The simplest procedure is the clot observation test described by Lee and White⁽¹⁹⁾. This should be repeated hourly until the patient is delivered or until the clotting mechanism has been restored to normal. In order to rule out the rare coagulation defect on the thrombin side, a few drops of topical thrombin may be added to a second tube and both incubated at 37 C. Clotting is considered abnormal if coagulation does not occur within 10 to 12 minutes or if there is dissolution of the clot after one hour. Defect on the thrombin side of the reaction can be detected by normal clotting in the tube to which the thrombin has been added. More elaborate studies may be performed by means of the Schneider fibrin titer assay⁽²⁰⁾.

Treatment

Whenever possible, treatment should be directed toward prevention of the factors which may lead to the hypofibrinogenemia. Toxemia of pregnancy, with or without premature separation of the placenta, constitutes one of the most common causes of hypofibrinogenemia. The usual efforts should be made to control toxemia insofar as possible. In the event of known intrauterine fetal death, frequent determinations of fibrinogen levels as denoted by the clot observation test will often serve as an index for admitting the patient to the hospital and

initiating the proper replacement therapy by fibrinogen.

The etiology of amniotic fluid emboli is not known; however, it is commonly seen in older multiparous patients, and particularly in those who have tumultuous labors either of spontaneous origin or induced by posterior pituitary extract. Medical induction by posterior pituitary extract should be carefully avoided in the latter group, unless there is sufficient reason to justify the possible risk.

In the presence of any serious degree of premature separation of the placenta, immediate rupture of the membranes has been recommended. Rupture of the membranes likewise would seem to be indicated when there is evidence of amniotic fluid embolism, or as early as feasible during labor in the patient who has known intrauterine fetal death. The purpose of this measure is to release a large amount of fluid with its high concentration of thromboplastin. In addition, with rupture of the membranes there is a greater tendency for all intrauterine products to drain toward the outside rather than to be forced into the maternal blood stream.

Purified fibrinogen is now available on a commercial basis, and can be given separately without the other blood constituents. In the event that the patient has lost considerable quantities of blood, the fibrinogen alone will be insufficient. Whole blood, or whole blood with fibrinogen, is essential for this situation. The required dosage of fibrinogen is usually 2 to 6 Gm. Since each 500 cc. of blood contains approximately $\frac{1}{2}$ Gm. of fibrinogen, it will require an average of 4 to 12 pints of whole blood for correction of the complication. Oftentimes the addition of purified fibrinogen will reduce the rapidity with which such whole blood is needed. In the event of amniotic fluid embolism or long-standing intrauterine fetal death, the fibrinogen factor alone may correct the bleeding tendency before actual clinical bleeding occurs.

Summary

1. It has been suggested that a number of maternal complications may occur as the result of the escape of intrauterine products into the maternal blood stream. These effects are similar to those noted in animals subjected to intravascular administration of

placental extracts. Among the complications is hypofibrinogenemia.

2. A review of the records of the Committee on Maternal Welfare reveals that failure of coagulation due to hypofibrinogenemia has apparently not been common.

3. Diagnosis of hypofibrinogenemia depends upon the presence of certain antecedent conditions: abnormal bleeding without evidence of clot formation, and disturbed clotting mechanism as demonstrated by the Lee-White clot observation test⁽¹⁹⁾.

4. Treatment should consist of prevention or control of toxemia, careful selection of patients for posterior pituitary extract induction, and whole blood transfusions, when necessary. The purified fibrinogen factor may be of value in controlling the active bleeding while whole blood replacement is being made, and may prevent the onset of serious bleeding in the event of long-standing intrauterine fetal death and amniotic fluid emboli.

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Discussion

Commander William S. Baker, MC, U.S. Navy (Camp Lejeune): Either the entity under discussion occurs in actual practice quite rarely or we as a group are not recognizing the symptom complex in the majority of patients manifesting an abnormal coagulation mechanism. To support the former alternative I would like to draw attention to the extremely low incidence of such cases as reported here today. Out of a total of 1,600 maternal deaths, 389 were associated with or caused by hemorrhage, and of these only 8 cases presented clinical evidence alone to support a possibly deranged coagulation mechanism as the motivating factor. Two other patients not included in the 389 cases studied did yield definite laboratory evidence of depleted fibrinogen, but died from causes other than hemorrhage. This represents an incidence of potential afibrinogenemia of 1 in 160 maternal deaths, and probably 1 in 450 deliveries—certainly an extremely low incidence in clinical obstetrical practice.

The number of deliveries performed at the Naval Hospital at Camp Lejeune during a four-year period ending December, 1953, was 5,857. During this period there were only 4 maternal deaths, or a maternal mortality of 0.07 per cent. The autopsy diagnoses of each of the deaths are listed as follows:

1. Pre-eclampsia, severe; acute intravascular hemolysis, lower nephron nephrosis
2. Cesarean section three weeks prior to death; acute fulminating septicemia; possibly afibrinogenemia
3. Lower nephron nephrosis due to incompatible transfusion given at another activity
4. Acute hypertensive encephalopathy; hypertensive cardiovascular renal disease; severe pre-eclampsia; tuberculosis, pulmonary, active, moderately advanced.

It will be noted that in only 1 case was depletion of the fibrinogen fraction a possible cause of the bleeding diathesis prior to death. This, incidentally, was never proved by recognized laboratory methods, but was merely clinically apparent. Thus this obstetric accident does not become clinically manifest as often as the current literature on the subject would lead one to believe.

Referring again to the 4 maternal deaths, it will be evident that 2 resulted from severe toxemia either alone or superimposed upon hypertensive disease. With the concept in mind that toxemia may be mediated in part by thromboplastin infusion and resultant intravascular fibrin deposition throughout the lesser and greater circulation, as recently advocated by McKay and his associates, we re-examined the histopathologic findings in both cases of fatal toxemia and found the typical fibrin deposition within the vessels of several of the major organs.

These findings may be significant in the light of our present understanding.

As to the etiology of afibrinogenemia, I completely agree with Dr. Donnelly. It appears that considerable experimental evidence and clinical observations on human subjects has seriously implicated a thromboplastin-like substance as the motivating factor. It is found in very high concentration in the decidua, placenta, and amniotic fluid. When it finds its way into the maternal circulation through open maternal sinuses or cervical vessels, it initiates intravascular clotting and thus depletes the circulating fibrinogen to below critical levels. This seriously impairs the coagulation mechanism as determined from the use of the Lee-White clot observation test. The host, in an effort to combat the intravascular deposition of fibrin, releases a fibrinolytic substance into the circulation, and this in turn results in an irreversible incoagulable state. This condition has been reported in association with eclampsia, severe premature separation of the placenta, long-standing intrauterine fetal death, and amniotic fluid embolism. Dr. Donnelly has ably presented the existing evidence in support of this thesis, and further discussion would be repetitious.

May I conclude by emphasizing certain points brought out in the paper that I also feel to be important? This fairly rare obstetric complication may be effectively prevented by the following measures:

1. Maintain an adequate prophylactic program against toxemia.
2. Do not use intravenous Pitocin in elderly primigravidos patients and in cases of polyhydramnios for induction purposes.
3. Induce labor early by amniotomy in all cases of hypertensive disease not complicated by toxemia.
4. Use the Lee-White clot observation test in all suspected cases of deranged coagulation mechanism.
5. Do serum fibrinogen determinations where reliable laboratory facilities are readily available.

The treatment of afibrinogenemia may be summed up as follows:

1. Early amniotomy should be done in cases of:
 - a. Severe premature separation of placenta
 - b. Long-standing intrauterine fetal death manifesting a coagulation defect
 - c. Suspected amniotic fluid embolism.
2. Transfusion of whole blood should be given as needed. (Each pint of whole blood contains 500 mg. of fibrinogen and will raise the patient's fibrinogen fraction 5 to 10 mg. per 100 cc.) Stored blood must not be more than five days old, as it contains a lowered active globulin fraction after that time.
3. Fibrinogen is now commercially available in the form of Cohn Fraction I. Four to 8 Gm. or more may be necessary to raise the fibrinogen level above 100 mg. per 100 cc., in order to restore the coagulation mechanism to normal.

Dr. James Caldwell: About four years ago I had 3 cases of this condition in one week. One patient had eclampsia and died. Another had a normal delivery, then started trickling blood which wouldn't clot. We kept her in delivery 16 hours, and gave 28 blood transfusions. We ran out of whole blood and resorted to plasma. After administering about 5 pints of that, the blood began to clot. We gave fibrinogen to the third patient.

Dr. Donnelly (closing): I can't quite accept the argument that the fibrin embolism, which is a very odd descriptive term, is the cause of toxemia in pregnancy, as Schneider contends, and as these cases suggest.

In summary, if a patient bleeds, in association with any of these antecedent complications, and the blood fails to clot, the diagnosis of afibrinogenemia should be considered.

Moreover, if the patient has lost blood, she needs whole blood by replacement. Administration of the fibrinogen factor might produce some clotting while large amounts of blood are being prepared for transfusion. Otherwise, I personally don't see any value in it.

THE DIFFERENTIAL DIAGNOSIS OF JAUNDICE

RICHARD G. CONNAR, M.D.

DURHAM

Although the differential diagnosis of jaundice is not difficult in the majority of cases, one not infrequently encounters a situation in which, in spite of the availability of numerous laboratory tests, it may be necessary to resort to surgery in order to establish a diagnosis. An ill advised operation in the presence of jaundice, however, may well result in the patient's death. Thus it behooves the physician to have an adequate knowledge of the etiology and classification of the disease in order to evaluate his patient more intelligently both from the history and the physical examination, and not rely completely upon the laboratory tests for a differential diagnosis.

Classification and Description

The simplest and possibly the best pathologic classification of jaundice is that of Rich, who divides jaundice into (1) retention jaundice, and (2) regurgitation jaundice. Retention jaundice is characterized by a stool that is normal or of an increased brown color, normal urine, a normochromic, normocytic anemia with increased bone marrow activity, a slight to moderate degree of jaundice, an enlarged spleen, and in the event of congenital hemolytic icterus, increased fragility of the red blood cells. Regurgitation jaundice is characterized by deep icterus, dark urine, and light-colored stools. It is more conveniently divided into (a) parenchymatous and (b) obstructive types.

Jaundice is recognized clinically by yellowish discoloration of the skin, mucous membranes, and plasma. Clinical estimation of the degree and course of jaundice may be unreliable, because the intensity of the

pigment in the tissues may not vary directly with the serum bilirubin⁽¹⁾. This has been explained by the fact that tissues which have been stained with pigment for some time often retain much of the pigment after the serum bilirubin has fallen to normal levels. It should also be kept in mind that the color of the skin is often misleading, because there are pigments other than bilirubin which may be responsible for the discoloration. Examples of the latter are seen in patients who have been on Atabrine therapy for long periods of time, in carotenemia due to an excess of carotene (the yellow pigment in carrots), and in certain industrial situations such as workers in trinitrotoluene. In most of these instances, the color of the conjunctiva, urine, and feces is not altered⁽¹⁾.

Jaundice is said to occur clinically when the serum bilirubin rises above 2 mg. per 100 cc. Bilirubin is an iron-free hemoglobin derivative formed by the action of the reticuloendothelial cells at the site of the breakdown of red blood cells. In its initial state, it is conjugated with a protein, is not excreted by the kidneys, and does not give a direct color reaction with Ehrlich reagent⁽²⁾. It is removed from the blood by the liver, where the protein is released and the bilirubin is excreted into the bile. Bilirubin is the chief pigment of the bile. It passes from the liver cells to the small biliary passages, into the common bile duct, and ultimately into the intestinal tract, where it is transformed by the action of bacteria into urobilinogen and stercobilinogen (these will be referred to collectively as urobilinogen). Urobilinogen is subsequently partially reabsorbed from the intestine and returned to the liver through the portal blood, a small amount being carried to the kidneys, where it is excreted in the urine. The urobilinogen remaining in the intestines is excreted in the feces and is subsequently oxidized to urobilin and stercobilin, which gives the fecal material its usual color.

The clinical classification of jaundice that is referred to most frequently is that of Ducci's:

1. *Prehepatic* (Retention—Rich)
2. *Intrahepatic* (Regurgitation: a. parenchymatous—Rich)
3. *Posthepatic* (Regurgitation: b. obstructive—Rich)

History

Because of the availability of numerous

liver function tests, a careful history is frequently neglected. In many instances, however, the differential diagnosis may rest almost entirely upon the history. The following factors should be taken into consideration:

Age

In patients under the age of 40, certainly parenchymatous jaundice is approximately three to four times as common as other types⁽¹⁾. In patients above the age of 40, however, neoplastic and calculus types of jaundice increase markedly in frequency.

Sex

The factor of sex is frequently of little help, except that carcinoma of the pancreas is more common in the male and cholelithiasis is more common in the female.

Pain

Real pain is usually indicative of surgical disease, but the absence of pain is of little help. Probably the most reliable pain pattern is that of biliary colic. Patients with pancreatic cancer more commonly have chronic pain which, when present, is usually first localized in the epigastrium. If pain is accompanied by marked weight loss, the diagnosis of pancreatic cancer should be strongly considered. It is true that patients with infectious hepatitis may have pain, but of a chronic less acute nature, and usually in the right upper quadrant. The absence of pain does not exclude a common duct stone.

Pre-icterus symptoms

Acute anorexia preceding jaundice almost always indicates hepatitis, either of the infectious type or homologous serum jaundice. Conversely, patients with common duct obstruction may also have anorexia, but not usually during the pre-icterus phase. A low-grade fever preceding the attack of jaundice usually accompanies hepatitis, whereas intermittent chills and fever are commonly associated with common duct obstruction.

A history of a blood transfusion, plasma or needle injection within the previous 45 to 120 days makes the diagnosis of homologous serum jaundice quite likely.

Pruritus

Although allegedly more common with mechanical icterus, this is not a reliable factor for differentiation, since it may also occur with parenchymatous jaundice.

Urine and stool

The color of the urine and stool may be extremely helpful in differentiating retention jaundice from regurgitation jaundice, but is of less value in differentiating the parenchymatous from the obstructive type of regurgitation jaundice.

Thus the history may be an extremely reliable aid in the differential diagnosis, or it may contribute little but negative information.

Physical Examination

The physical examination may not contribute heavily to the differential diagnosis, but certain signs, when present, may be of great help. A large tender liver may or may not be found in hepatitis. An impression of nodularity is frequently unreliable, but in certain instances the presence of tumor nodules within the liver may be unquestionable. The gallbladder when palpable suggests the diagnosis of carcinoma of the head of the pancreas, ampulla of Vater, or the bile ducts. Liver breath is not encountered in obstructive jaundice except in long-standing cases marked by considerable liver damage. Spider angioma, ascites, edema, and splenomegaly suggest the diagnosis of parenchymatous disease.

Laboratory Tests

Although liver function tests may be divided into (1) those primarily of excretory function, and (2) those primarily of metabolic function, all are dependent on the "patency of the excretory ducts, adequacy of blood supply, and integrity, both anatomic and physiologic, of hepatic cells—to mention three of many factors."⁽³⁾ One may become lost in the multiplicity of liver function tests, for which reason it is better to depend on a few of the more reliable ones. Unfortunately, there is none that foretells early damage. The most reliable determinations are: the serum bilirubin, the thymol turbidity or cephalin flocculation, the alkaline phosphatase, the bromsulphalein, and the urine urobilinogen tests.

Excretory

Serum bilirubin. Bilirubin is normally present in the serum in quantities varying from 0.8 to 1 mg. per 100 cc. In the past, more emphasis has been placed upon the determination of indirect (protein-bound bilirubin) and direct (free) bilirubin. These determinations have not proved to be reli-

able for differential diagnosis in most laboratories.

Icterus index. This is a simple index, inexpensive and useful in following the course of jaundice, but otherwise useless. The normal range is from 4 to 8. It should be remembered that this test does not differentiate other pigments from bilirubin, so that the presence of carotene in the blood serum and hemolysis gives false readings.

Urine urobilinogen. Normally urobilinogen is excreted in the urine in amounts varying from 0.5 to 4 mg. in 24 hours. There is diurnal fluctuation in the rate of urobilinogen excretion, and if a 2-hour test is performed, it should be done early in the afternoon when the excretion reaches a peak. This test may be affected by renal failure or reduction in the bacterial flora of the colon from antibiotic therapy (reduction of bilirubin to urobilinogen depends upon the putrifying action of bacteria in the gut). In cases of obstructive jaundice, if the obstruction is complete, urobilinogen is absent from the urine, whereas if the obstruction is incomplete, urobilinogen may be present. In the case of infectious hepatitis, the amount of urobilinogen may vary from none to an increase in excretion. Early in the course of hepatitis, urobilinogen usually increases, then falls as the peak of the jaundice is reached, and then as the jaundice subsides, appears in the urine in increased amounts. It is at the phase of the disease when urobilinogen is absent from the urine that parenchymatous jaundice is most likely to be confused with obstructive jaundice. In the case of hemolytic jaundice, excretion of urinary urobilinogen may be normal or slightly increased. This test is said to lack value when Aureomycin has been given.

Alkaline phosphatase. The normal range of alkaline phosphatase in adults is 3 to 4 Bodansky units per 100 cc. of serum. Levels in children may range from 5 to 14 Bodansky units. Alkaline phosphatase is formed primarily in osseous tissue, but supposedly is excreted only in the bile, for which reason it is a valuable excretory function test. On the other hand, it should be remembered that increased osseous activity may be responsible for elevation in the serum alkaline phosphatase. In the presence of jaundice, values under 10 in adults usually indicate parenchymatous jaundice, whereas values above 30 almost without fail indicate ob-

structive jaundice. Elevation of alkaline phosphatase above 10 Bodansky units may occur in about a third of the patients with parenchymatous jaundice⁽⁴⁾.

Bromsulphalein. This is primarily an excretory function test, but is valueless in the presence of jaundice, since it depends upon a colorimetric determination of the dye in the serum. Conversely, in the absence of jaundice, it is one of the more reliable tests.

Metabolic

Thymol turbidity. This test depends upon the presence of an abnormal protein in the serum, which is produced in the presence of liver damage. The mechanism of the test is still not thoroughly understood, but apparently turbidity is produced in the thymol buffer solution by the interaction of gamma globulin and a lipoprotein component of the serum. Lipemia may sometimes cause a slight increase in the thymol turbidity; but the thymol flocculation reaction, which apparently is produced only by gamma globulin, is negative. Results above 5 units accompanied by positive flocculation are usually indicative of diffuse parenchymatous liver damage.

Cephalin flocculation. This is a slightly more sensitive test than the thymol turbidity test and is also dependent upon the presence of gamma globulin. This test takes from 24 to 48 hours to complete, and values of 0 to 1 plus are considered normal. Positive results are usually not seen in obstructive jaundice unless the obstruction has been present for a considerable length of time.

Total protein values and albumin-globulin ratio should be determined in all patients with jaundice. This determination is of relatively little value, however, in the differential diagnosis. Prothrombin time should also be determined, but considerable liver damage may be present before there is significant alteration. More reliable, perhaps, is the response of the abnormal prothrombin time to the parenteral injection of vitamin K.

The determination of cholesterol-cholesterolester ratio has not been as dependable in the differential diagnosis of jaundice as early reports might indicate⁽⁴⁾. This is a rather tedious determination to make, and most laboratories in small hospitals are not equipped to do it. Although there is no doubt that the cholesterol esters are significantly lowered in the presence of severe liver disease, the ratio may be low in the absence of

liver disease due to increased total serum cholesterol.

Among the more promising newer liver function tests is the response of the blood sugar to the injection of HGF (Hyperglycemic Factor—Eli Lilly and Company), reported by Myers and his co-workers at Duke Hospital⁽⁵⁾. HGF is excreted by the alpha cells in the pancreas and exerts its hyperglycemic effect by an increase in hepatic glucose production, presumably by glycogenolysis. Three milligrams of HGF is injected intravenously, and serial determinations of the arterial blood glucose concentration are made. Patients with hepatitis or cirrhosis show elevations of less than 5 mg. per 100 cc., while patients with extrahepatic obstructive jaundice show responses similar to normal controls (13 mg. to 21 mg. per 100 cc.). To date this has proved to be an amazingly reliable test in the differential diagnosis of jaundice. However, HGF is not available at present because of the expense of production.

Preoperative visualization of the common bile duct might eliminate a certain number of diagnostic laparotomies. Recently E. R. Squibb & Sons marketed a dye, Cholografin, which will visualize the common bile duct with x-ray in about 50 per cent of the cases. This dye is given intravenously in a 20 per cent aqueous solution and has a 64 per cent iodine content. Experience has been limited in this country to date, but complications have not been a problem.

The Use of Surgery in Diagnosis

After a careful history, physical examination, and review of the results of the laboratory determinations, it is not unusual to discover that the distinction between parenchymatous (intrahepatic) and obstructive (extrahepatic) jaundice cannot be made conclusively without resorting to surgery. This is not difficult to understand when one considers that long-standing mechanical obstruction of the biliary tree will result in considerable liver damage. Thus liver function tests become of little value in the differential diagnosis. Conversely, the less common type of periportal or cholangitic hepatitis may be impossible to differentiate from obstructive jaundice, since the laboratory determinations may show no significant evidence of impairment of liver function. This type of hepatitis is characterized histologic-

ally by cholangiolitic inflammatory changes with minimal evidence of liver damage, and clinically by prolonged jaundice⁽⁶⁾. In the usual case of hepatitis, jaundice lasts only a few weeks, whereas in cholangitic hepatitis the jaundice may persist up to four months.

One may justifiably raise the question then as to whether surgical exploration should be made in every case of doubtful diagnosis; yet surgery is not without risk, particularly in the patient with poor liver function. In deciding which patients are candidates for operation, it is convenient to divide the patients into two groups according to age: (1) those under 40 and (2) those over 40, as suggested by Stine, and others⁽⁶⁾. In the younger age group, hepatitis is three to four times as common as neoplasm as a cause for jaundice, whereas in the older age group neoplastic and parenchymatous jaundice are about equally distributed, comprising about 80 per cent of the cases, with calculus jaundice occurring in about 15 per cent of the cases⁽¹⁾.

With these figures in mind, it seems logical that when one encounters jaundice in a patient more than 40 years of age, with minimal evidence of liver damage as demonstrated by serial laboratory tests, and when the jaundice does not subside rapidly after two weeks, laparotomy should be resorted to. A biopsy of the liver should be done at the time of operation, whether the patient has parenchymatous or obstructive jaundice. In patients less than 40 years of age, one may be justified in deferring surgery an additional week, particularly if the history is suggestive of infectious hepatitis or other type of parenchymatous jaundice. Jaundiced patients who are to be subjected to operation should be in the optimum condition possible. Anemia should be corrected by blood transfusions, hypoproteinemia by serum albumin or blood, toxic anesthetic agents should be avoided, and the patient should receive a high carbohydrate, high protein diet, with supplemental vitamins, particularly parenteral vitamin K. Intravenous glucose may be a valuable adjunct.

In the seriously ill patient in whom a diagnosis is imperative, a small right rectus incision can be employed using local anesthesia, the liver gently palpated, and then a biopsy made. This frequently is a more satisfactory procedure in the author's experience than a needle biopsy of the liver, although it may be wise to do a needle biopsy first.

Conditions Associated with Jaundice

There are a number of miscellaneous conditions which may be associated with jaundice, but which usually can be eliminated in the differential diagnosis. Among these are: congestive heart failure, pancreatitis, Hodgkin's disease, leukemia, thyrotoxicosis (rare), actinomycosis, liver abscess (amebic and pyogenic), histoplasmosis, peptic ulcer, echinococcosis, amyloid disease, and carcinomatosis⁽¹⁾.

Jaundice of the newborn is a subject within itself and, in general, does not present the same problems, although the differential diagnosis may frequently be difficult.

Summary

It is possible in approximately 90 per cent of all cases of jaundice to determine the cause by careful correlation of the clinical features with only a few essential laboratory tests. In the remaining cases, needle biopsy or exploratory laparotomy may become necessary to establish a diagnosis.

In general, the most informative liver function tests are serum bilirubin, thymol turbidity or cephalin flocculation, alkaline phosphatase, and urine urobilinogen.

In patients more than 40 years of age with minimal evidence of liver damage obtained by laboratory tests, if the jaundice does not subside rapidly, within two weeks after its peak, laparotomy should be resorted to because of the increased incidence of extrahepatic obstruction. In patients less than 40 years of age, the same time interval should be adhered to except when the history is strongly suggestive of infectious hepatitis.

Limited exploration and direct biopsy of the liver, using local anesthesia, may be more satisfactory than needle biopsy of the liver.

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Health education is an aspect of all education and is a life long process. James M. Mackintosh, Prof., European Conference on Health Education of the Public, London, England, April 10-18, 1953.

THE SPLENIC FLEXURE SYNDROME

WALTER SPAETH, M.D.

ELIZABETH CITY

The splenic flexure syndrome is important as an entity that produces symptoms suggestive of coronary artery disease. Machella⁽¹⁾ first adequately described and reported the condition. Johnson⁽²⁾ recently invited attention to its symptomatology in an editorial. During the preceding 30 months 24 such patients have been diagnosed and followed in private practice. Eighty-three per cent of the patients believed they had heart disease. Twenty-five per cent were referred for evaluation of possible coronary artery disease. A detailed history and physical examination produced no evidence of cardiac disease in any case.

During an attack physical examination revealed an area of hyperresonance to percussion in the left upper quadrant of the abdomen. The diagnosis was not made in any case unless fluoroscopic examination or x-ray studies of the abdomen revealed an accumulation of gas in the splenic flexure of the colon. In several cases repeated attacks had to be observed before the diagnosis

could be substantiated. Relief of symptoms was usually rapidly obtained with expulsion of gas induced by enemas or by the use of atropine sulfate given parenterally.

Incidence

Sexes were divided equally in the 24 cases. The average age of males was 41.2 years and of females, 32.2 years. The youngest patient was a 22 year old woman. The oldest patient was a man aged 55. Any patient with obvious cardiac or gastrointestinal disease was excluded from this series.

Signs and Symptoms

During an attack of the splenic flexure syndrome, the majority of complaints are located in the thoracic region. The most frequent symptom is a sensation of fullness or aching in the left anterior part of the chest in the region of the precordium. As aching increases, many patients complain of left dull, aching subscapular pain or a feeling of pressure in the supraclavicular space. Frequently aching extends into the shoulder and left upper arm; however, in only 1 case did it radiate as far as the wrist. Substernal pain, pressure, or smothering sensations are not common symptoms. Pain in the jaw is

Table 1
Analysis of Twenty-Four Cases of the Splenic Flexure Syndrome

Case	Age/Sex	Location of Pain	Precipitating Causes
1.	29/F	Precordium, left shoulder	Alcoholic mother
2.	28/F	Left upper abdomen, substernal	Pressing responsibilities
3.	54/M	Precordium, left arm, shoulder	Cardiac neurosis
4.	40/F	Precordium, left shoulder, scapula	Unhappy life situation (school teacher)
5.	22/F	Left lateral chest, abdomen	Fatigue in young mother
6.	40/F	Precordium, left arm, shoulder	Financial and personal difficulties (widow)
7.	26/M	Precordium, substernal, left arm	In-law difficulties
8.	39/F	Precordium, left upper abdomen	Matrimonial difficulties
9.	40/F	Entire left chest, left shoulder	Matrimonial difficulties
10.	24/F	Precordium, left jaw, shoulder	Family problems
11.	38/M	Entire left chest, left upper abdomen	Tension, psychoneurotic personality
12.	27/F	Subscapular, left shoulder	Unhappy life situation (divorcee)
13.	28/F	Precordium, left shoulder, abdomen	Tension in farm agent
14.	39/M	Precordium, left subscapular	Cardiac neurosis
15.	27/F	Precordium, left shoulder, upper abdomen	Tension arising out of matrimonial difficulties
16.	40/M	Left lateral chest and abdomen	Chronic alcoholism
17.	35/M	Precordium, left shoulder and arm	Anxiety state in veteran
18.	27/M	Precordium, left arm	Anxiety state
19.	44/F	Left breast, shoulder, upper abdomen	Tension in mother
20.	54/M	Left upper abdomen, substernal	Diabetes mellitus with peripheral and autonomic neuropathy
21.	34/M	Left chest, substernal	Tension state
22.	53/M	Precordium, left upper abdomen	Tension in school teacher
23.	44/M	Left upper abdomen, substernal	Tension state
24.	50/M	Precordium, left shoulder, arm	Traumatic loss of right eye 4 weeks previously

unusual. A common complaint is that deep breathing increases the symptoms. Several patients complained of a forceful heart beat and tachycardia. These symptoms occur later in the attack, when apprehension is present.

It is of interest that frequently patients do not voluntarily describe abdominal symptoms. Usually on direct questioning, however, they will admit a sensation of fullness, distension, or vague discomfort in the left upper quadrant of the abdomen, both anteriorly and laterally. Occasionally epigastric fullness accompanies the abdominal symptoms. Relief of symptoms is not obtained by eructations however. Most individuals admit relief of symptoms by passage of gas by rectum.

Physical examination during an attack frequently reveals a moderate degree of elevation of the left lobe of the diaphragm to percussion. The percussion note over the left lower portion of the chest and left upper portion of the abdomen, both anteriorly and posteriorly, is hyperresonant. In 50 per cent of the cases firm pressure in the left upper quadrant of the abdomen will accentuate symptoms which are present. Infrequently manual pressure will produce borborygmus, with sudden disappearance of the area of hyperresonance and relief of symptoms.

Examination of the heart was normal in every case, with the exception that occasionally a premature ventricular beat or sinus tachycardia was encountered.

Case 1

The patient, a 27 year old white woman, wife of a Naval officer, was seen with a chief complaint of dull, aching precordial, left subscapular, and shoulder pain, present recurrently for one month. Attacks were more frequent late in the day. The patient had been having matrimonial difficulties for several months. She admitted exacerbations of symptoms with emotional stress. At the height of symptoms, she experienced dull, aching, left upper abdominal pain. However, severe fullness in the left side of the chest and aching in the left shoulder and subscapular region were of greater importance to her. She was of the opinion that she had heart disease. Direct questioning revealed typical symptoms of mucous colitis for eight weeks. Splenic flexure symptoms were frequently relieved by the onset of diarrhea associated with the mucous colitis.

Physical examination during an attack of precordial symptoms was completely normal except for hyperresonance to percussion in the upper left quadrant of the abdomen. Firm manual pressure over this region accentuated her thoracic symptoms and produced dull pain in the left shoulder and upper arm.

Laboratory studies were within normal limits. An x-ray film of the abdomen revealed an accumulation of gas pocketed in the splenic flexure of the

colon. The left leaf of the diaphragm was elevated. The patient was given 1/150 grain of atropine and 2 grains of sodium phenobarbital parenterally. Thirty minutes later she was given an enema. This caused expulsion of a considerable amount of gas, and relief of all symptoms. A repeat roentgenogram of the abdomen revealed that the pocket of gas had disappeared.

On a regimen of tincture of belladonna and bland diet, and with readjustment of her home life, the patient has not had a recurrence of symptoms for 18 months.

Case 2

The patient, a 55 year old white married man, was seen in the emergency room of the Albemarle Hospital, Elizabeth City, complaining of pain of three hours' duration in the lower portion of the left side of his chest. He stated that associated with this symptom was a sensation of substernal soreness. Similar episodes had been present several times weekly during the preceding six months. Further history revealed that frequently during the past year he had noticed dull, aching pain in the left upper quadrant of the abdomen, with associated distension. Relief of these symptoms was obtained by flatulence. A brother of the patient had suffered a myocardial infarction 15 months previously. The patient was extremely apprehensive and thought that he was having angina pectoris. He stated that he had been constantly worried about his heart since the onset of his present illness.

Physical examination was entirely normal with respect to the cardiovascular system. Examination of the abdomen revealed moderate tenderness in the left upper quadrant. Percussion note over this area was hyperresonant. Digital pressure in the left upper quadrant of the abdomen caused an accentuation of substernal symptoms. Pain also appeared in the left shoulder and subscapular area.

Routine blood studies, sedimentation rate, and urinalysis were normal. An electrocardiogram was within normal limits. A flat plate of the abdomen revealed a globular mass of gas in the splenic flexure of the colon, which was located high in the left upper quadrant of the abdomen. Slight elevation of the left leaf of the diaphragm was evident.

The patient was assured that his symptoms were not cardiac in origin. He was given 1½ grains of phenobarbital orally and advised to go home and take a large enema. When seen in the office next day, he reported that the enema had brought immediate relief of symptoms by expulsion of gas. The entire symptom-complex was thoroughly explained to the patient. During the past eight months he has remained asymptomatic.

Laboratory Findings

Routine blood studies, urinalysis, and stool studies were normal in every case. Leukocytosis and an elevated sedimentation rate were not present. Electrocardiograms obtained in 5 cases during attacks were normal. There was no deflection of the S-T segment from the isoelectric line. Abnormal T waves were not observed.

Fluoroscopy or a flat plate of the abdomen confirmed the diagnosis in each case. In several cases x-ray examination made during repeated attacks was necessary before the diagnosis could be confirmed. In each instance an accumulation of gas was observed

in the region of the splenic flexure of the colon. Occasionally fecal material could be outlined distal to this area in the colon, suggesting a damming of gas behind the feces. A barium enema in 15 cases was normal, except that in many cases spasm in the descending colon distal to the splenic flexure was noted. No evidence of organic obstruction was present.

I believe that the diagnosis of splenic flexure syndrome should be reserved for cases presenting no organic disease and exhibiting by fluoroscopy or x-ray an accumulation of gas in the splenic flexure of the colon.

Differential Diagnosis

When first observing the patient during an attack, one must exclude the possibility of acute myocardial infarction or acute coronary insufficiency without infarction. Examination does not reveal the acutely ill individual usually seen with acute myocardial infarction. Shock, with its dramatic picture, is not present. The pulse is strong. The blood pressure is within the patient's normal range. Heart sounds are of good quality. There is no complaint of crushing, constricting substernal pain or of severe pain radiating into the neck, jaws, shoulders, or arms. The entire symptom-complex is less severe. Laboratory studies, including electrocardiogram, are normal. Occasionally renal disease, duodenal ulcer, or left spontaneous pneumothorax might be considered as diagnostic possibilities. Careful history and physical examination correlated with simple laboratory studies will usually exclude these diagnoses.

Etiology

The onset of symptoms occurred with emotional conflicts in 83.3 per cent of the cases in this series. Other factors found to be capable of initiating an attack were chronic fatigue, constipation, and overeating. A long history of chronic constipation was present in the majority of cases.

Bockus⁽³⁾ and Kantor⁽⁴⁾ have reported that distension of the splenic flexure of the colon may produce precordial symptoms and thoracic symptoms on the left. Machella⁽¹⁾, was able to reproduce the symptom-complex by inflating a rubber balloon in the splenic flexure. In individuals whose transverse colon bends sharply or forms a right angle with the descending colon, an ideal situation exists for trapping gas or feces in the

splenic flexure. The localizing of excess gas in the splenic flexure apparently may be produced by several means:

1. The presence of spasm in the descending colon distal to the splenic flexure may obstruct or delay passage of gas or feces through the splenic flexure area and produce distension. Areas of spasm in the descending colon were observed in barium enemas in these cases.

2. Fecal material occluding a portion of the descending colon would be capable of blocking the free passage of gas. Chronic constipation was a common complaint in this group of patients.

3. In emotionally labile individuals there is frequently observed a rapid surge of a barium meal through the stomach and small intestine. Similarly, the rapid advance of food through the upper gastrointestinal tract occurring simultaneously with spasm in the distal colon could produce a sudden increase in gas or feces in the region of the splenic flexure. This in all probability is the explanation for the occurrence of the syndrome following overeating.

The direct cause of the symptoms is distension of the splenic flexure by either gas or feces. In many individuals the splenic flexure of the colon lies high and posterior in the left upper quadrant of the abdomen. In this position it lies either in contact with or in close proximity to the diaphragm. Distension of the splenic flexure may produce elevation and irritation of the diaphragm. Diaphragmatic irritation may cause some of the symptoms. Accordingly, factors capable of localizing an accumulation of gas or feces in the splenic flexure are: (1) spasm in the distal colon, (2) feces in the distal colon, (3) a combination of massive and rapid peristalsis in the gastrointestinal tract proximal to the splenic flexure occurring at the time of spasm in the descending colon.

Treatment

Treatment of the splenic flexure syndrome must of necessity be concerned with two objectives: (1) Relief of the immediate attack is of primary importance; (2) the avoidance of recurrent attacks must be considered.

Relief of symptoms in the majority of acute attacks of this syndrome may be attained by the use of antispasmodics and sedation, followed by enemas. Atropine and

one of the barbiturates are given initially, either orally or parenterally. This combination produces mental relaxation and relief of spasm in the intestinal tract. Within a short period the patient may begin to expel large amounts of gas by rectum. If not, enemas should be used to initiate expulsion of gas, and may be necessary if fecal material is present and obstructs the free passage of gas.

In order to avoid recurrent attacks of the syndrome, several objectives must be considered. The patient should be informed of the cause of the symptoms. Reassurance that the symptoms are not of cardiac origin is essential. Because anxiety may produce an acute attack, mental conflicts and emotional crises should be sought for and readjustments attempted. A bland diet and antispasmodics are of aid in reducing irritation in a hypersensitive colon. Relief of chronic constipation is necessary. No stereotyped therapy will suffice in all cases.

Summary

1. The splenic flexure syndrome is a symptom-complex produced by an accumulation of gas trapped in the splenic flexure of the colon. It is believed this syndrome is a variant of spastic colon. A group of 24 cases which have been followed for 30 months have been reported. Recognition of the syndrome is important in the differential diagnosis of coronary artery disease.

2. Emotional instability and stress are factors in initiating attacks.

3. Treatment consists of psychologic readjustment and therapy directed towards relaxation of the intestinal tract.

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SOME PROBLEMS OF TALKING TO SICK PEOPLE

HARLEY C. SHANDS, M.D.*

CHAPEL HILL

In this centennial session it is appropriate, I think, to discuss some of the problems involved in talking to sick people. The family doctor of one hundred years ago was limited in effective pharmacologic agents, but there is evidence that he may have been a more important factor in the patient's daily life than is his more scientifically oriented counterpart. In the field of psychiatry, and particularly in the rapidly growing borderland between medicine and psychiatry, we have become increasingly interested in obtaining a scientific understanding of the effect of emotions upon disease states, and, conversely, of the effect of disease states upon the emotional balance of the patient. For this discussion we have drawn, for the most part, upon experience obtained from talking to patients suffering from some sort of malignant disease.

Study of these patients has led to the conclusion that patients in the terminal stages of almost any disease may be comforted by appropriate psychotherapeutic measures. Indeed, from feeling that because a given patient is hopelessly ill he cannot be helped by therapy of this type, we have rather swung to the opposite extreme of believing that supportive therapy, including psychotherapy, is the most effective method by which medical help can be extended to such suffering patients.

The Importance of Predictable Human Contacts

The theoretical basis upon which this idea rests is that, while growing more ill, a patient can keep a closer grasp upon reality if he has frequent contact with another human being who repeatedly presents to him essentially the same appearance and attitude. With many changes inside, a consistent picture outside is of increased importance. Many of you, I am sure, have noted differences in the degree of serenity of patients who could count upon the attention of relatives and those who could not. Religious counselors frequently provide great comfort to patients, much of which we believe can

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*Associate Professor, Department of Psychiatry, University of North Carolina School of Medicine, Chapel Hill, N. C.

A.M.A. Approves Simplified Insurance Claim Form

Approval has been granted by A.M.A.'s Council on Medical Service to a simplified insurance claim form drafted by a special committee of the Health Insurance Council. A.M.A.'s Committee on Prepayment Medical and Hospital Service collaborated with the H.I.C. committee. The form is designed for use in administering surgical expense benefits under group insurance. Physicians who practice in areas where this type of insurance coverage is prevalent should be particularly interested in this development.

be traced to the continuous and predictable human contact. The predictability of behavior on the part of doctor or attendant is of much greater value than reassuring statements. Several patients have remarked on their annoyance at being told that they looked well at a time when they felt bad. This sort of comment appeared false to them, and aroused a good deal of suspicion.

To a growing number of people it appears that psychiatry is essentially the study of the processes of communication, and I am presenting this material as a sort of experiment in communication. The fundamental requirement in any attempt to transfer information from one person to another is a common frame of reference. It is often difficult for a patient to understand how different his view of a situation may be from that of his physician, and the contrary is frequently true. Similarly, the psychiatrist and the general physician frequently see problems in a somewhat different way. Therefore, I will attempt to summarize our experience in a physiologic framework, treating the information which is transferred from doctor to patient as though it were a substance, even though at times the medium of communication may be nothing more tangible than an expression crossing the face of the doctor, or the absence of an expected occurrence.

To point out parenthetically how solid a communication can be effected in this way: A woman who knew a lot about her illness was waiting to hear whether or not her skull films showed the presence of a feared metastasis. One morning she told me that there was indeed a metastasis. When I asked how she had found out, she said that only one of the group of doctors and students who usually made rounds had come to speak to her that morning and she had concluded that the hopelessness of the situation had scared the others off.

The importance of the relationship between the patient and predictable known attendants is pointed up by another incident drawn from the experience of the aforementioned patient. As she regained her strength she passed through several stages somewhat similar to those seen in early childhood, in one of which she was terrified of anything new or strange. One night she was awakened by a noise in the next room, in which there was another quite ill patient. In her uncertainty she feared that she was going crazy

and that the other patient was being tortured. A few days later she remarked that a change in service (she had been in the hospital for months) caused her great anxiety about the new doctors, since "you can never tell what strangers are going to do." It was important to this patient to be able to count on seeing the same person time after time, and it greatly upset her to lose any familiar figure.

In speaking of these problems, either generally or in more precise scientific terms, it is natural to refer to them as problems of "feeding," on the one hand, and of "seeing" on the other. We speak of the "meat" of a discussion, and of getting "a new view of a problem," a new insight. To many patients the reassuring effect of greeting a familiar and trusted human being is similar to that of the return of the dawn, which is so universally greeted with relief by the very sick. In both cases it appears that the effect is primarily that of increasing the patient's ability to predict his surroundings and enabling him to reduce the vigilance with which he feels compelled to meet each new occurrence.

The Function of the Psychiatrist

The psychiatrist's function in many cases is to serve as an adjunct to many processes which do not really involve him but which cannot take place without some such influence. In this respect his function may be compared to that of a catalyst. It is also somewhat like that of a parenterally administered fluid which facilitates the return of the organism to a steady state. A number of other striking comparisons can also be made, since psychiatric treatment is largely painful, expensive, confining, and certainly to be avoided if any other satisfactory method of dealing with the problem presents itself.

The nutrition supplied by either psychotherapy or dextrose solution is inadequate and in any case is a poor substitute for the hearty fare of everyday life; but at times it is all that a very ill person can assimilate. The process of returning to a full diet is somewhat similar to that of resuming a full degree of interest in the surroundings. It is of immense interest to watch, as I am sure you have done repeatedly, the slow return to awareness of outside objects in the process of convalescence. After an extensive operation it was almost a week before one patient was able to make even the response

of a faint smile. Somewhat later, however, this same patient was able to describe her feeling of relief at being able to count on daily visits, even at a time when she was unable to make the effort of acknowledging them.

Freud, in one of his papers, quoted as the appropriate attitude for the psychotherapist the famous words of Ambroise Paré concerning the wounded men he was treating: "I bind their wounds and God heals them."

Psychotherapy as an Adjunct to the Doctor-Patient Relationship

Most of these points are familiar to any sensitive physician, and the psychotherapeutic job which is involved is performed much more easily as a supplement to the existing relationship between patient and doctor than as a task for another specialist. In other words, I suggest that a surgeon with some interest can do a much better job of psychotherapy with these patients than can a psychiatrist with no other relationship with the patient. It is a source of constant surprise, however, to find how careful one has to be to interpret correctly what a patient says and does. One of the first patients I was asked to see in our project was a woman who had become acutely depressed because, I was told, of an argument with her alcoholic husband. In the course of the interview it developed that the depression had come on when her surgeon left town to attend a medical meeting. The surgeon was a kindly man and had no idea that he was in any way disappointing the patient; however, on first consulting him, she had asked for reassurance that he would not leave her, and he had given it. When he left for the meeting, she was in good hands and in good condition. From his viewpoint he had not left her in the lurch, but from hers he had. It is, of course, impossible to say how this situation might have been prevented, but had matters been clarified to the mutual satisfaction of patient and surgeon, the patient might have suffered a less severe reaction.

So many events in everyday living tend to reassure a person that everything is all right that he can usually put up with a good deal of uncertainty in any one area. On the other hand, one of the major results of a severe illness is so to limit the number and variety of the patient's personal contacts that each one comes to have an overwhelming importance to him. The restriction in

contacts also tends to increase the demands upon those persons with whom he is still in contact. The situation may then result either in a new level of compensation in the relationships or in decompensation of one sort or another, depending upon the intensity of the demands and the capacity of the attendants.

The shifting need in this type of situation was well described by a woman whose breast lesion had been followed postoperatively for two years in the tumor clinic. She said that at first bi-weekly visits were not nearly frequently enough to allay anxiety. After two years of uneventful visits with no sign of a recurrence, she felt that visits once every two or three months were sufficient to maintain her peace of mind.

The Release of Hidden Emotions

To pursue our analogy further, communication has for the patient not only the function of nutrition, but also that of excretion. Here again a little training may enable a physician to notice many ways in which talking to a doctor may relieve the patient's mind besides informing him of important complaints. The analogy here to certain aspects of nursing care is very close, since the most important thing is to help the patient get rid of these excreta without feeling that the process involves soiling the therapeutic attendant; and I submit that in many cases it is easier to administer an enema than to accept an attack upon one's competence as a physician.

A fundamental rule in dealing with any hollow organ is that interference with the drainage of an organ makes the contents of that organ liable to infection. In this way, the whole person may be compared with a hollow organ from the standpoint of communication. An unexpressed fear or doubt or annoyance tends to color every succeeding transaction with the person to whom the feeling is related, and, in a vicious circle, leads to further disturbance of the relationship. In addition, a generalizing process takes place, so that as the patient experiences distrust in his relation to, say, a physician, he tends to develop distrust towards other members of the therapeutic team and to the institution of which the team is a part.

In reference to this generalizing tendency, one patient who was terribly disturbed on learning that she had a cancer felt threat-

ened on all sides following the interview and sat bolt upright, quivering with fear, in her living room all night, with all the lights on. For weeks following she had a sharp reaction every time she saw a word such as "cancelled," which has the same first syllable as "cancer." Another psychiatrist reported seeing a patient who had the same sort of reaction to a word like "dancer," which rhymes with "cancer." Another patient said that for months after a laparotomy she tended to flinch and hold her abdomen any time anyone came close to her. During a vigorous back rub she felt that the nurse was digging her fingers down to the bone.

Guilt and shame reactions

The material which these patients need to excrete has the peculiar property of being, to a considerable extent, partly subconscious. Even when it becomes more available, the patient frequently feels somewhat ashamed and has to be encouraged to let it come out in conversation. One may find here a suggestion as to the problem of delay in seeking treatment—which is so common and complicating in patients with cancer. Many patients tend to feel responsible for their lesions and their feelings, and it is difficult for them to discuss either without the danger of a great loss of self-respect.

We have been much impressed with the frequency of guilt and shame reactions in patients suffering from severe disease, especially malignant ones. These patients frequently demonstrate a great deal of concern lest illness make them outcasts, and they maintain a front as long as possible, often until the lesion is far advanced. Patients of this type have told us they felt the lesion could be traced to a previous venereal disease, to "youthful indiscretions," to "alienation from the Divine Intelligence," and so on.

Psychiatrists obtain much useful information by means of dreams which patients report. These dreams often convey meaning which remains obscure to the patient. A rather sophisticated nurse with wide surgical experience had a cancer of the cervix. While in the hospital for treatment, she conveyed through a number of interesting dreams a state of panic which she had otherwise held in check so successfully that the medical staff referred to her as their prize patient. Following a transfusion, for example, she dreamed that a doctor with a

huge syringe was injecting some substance which was destroying her will power and making her a slave.

Fear of the doctor

Of all the feelings which are difficult to communicate, suspicion and fear of the other person tend to be the most troublesome. We have been much struck by the manner in which the emotional reactions of the doctor frequently turn up in the interview or history-taking session, and by the manner in which the comments of this sort cause a lingering disturbance in the relationship. In such a situation it may become quite impossible for the patient to relieve himself of suspicion or any of the other feelings of which he is ashamed.

One of the comments which have been reported to us most frequently is that conveying surprise or condemnation on the part of the physician, especially with reference to the problem of delay. Patients have reported being "bawled out" by the physician; one woman stated that a doctor asked her if she didn't know what a terrible thing it was to die from cancer and how much more likely she had made that eventuality by waiting so long to seek treatment. We feel that patients probably exaggerate these comments—which in any case are rare—but such reports turn up frequently enough to make it likely that patients do, in some instances, pick up attitudes of disapproval from physicians which increase their own sense of shame or guilt and tend to make them feel more like outcasts.

Management of Problems of Communication

"Keeping out of the way"

I should like to make a few tentative suggestions about the management of these problems in line with the analogy which thus far has run through this discussion. First, a word or two about medical progress during the last few decades: The most significant advances apparently have been made in learning how to keep out of the way of the natural healing processes. The earlier practice of administering a large number of potent medicines has been replaced almost entirely by the judicious use of agents which promote and restore the ability of the organism to bring itself back into balance. The advances which have been made in interviewing techniques and in the further

understanding of human beings have followed a similar line.

In general the psychotherapist follows the rule of doing as little as possible in the way of making suggestions, asking questions, and so on, confining his activity to displaying interest, in one way or another, at a time when he wishes the patient to continue along the same line. This method is characteristically time-consuming and is certainly not universally to be recommended, but the results are interesting when, even in a short period, further investigation is chosen in preference to answering a question.

As a case in point, a young man seen recently said that he had had some rectal bleeding, and he wondered if it could be due to an ulcer. On the face of it this was a simple situation: The boy was confused about the term "bleeding ulcer"; he had known several people who had ulcers, and all of them had bled. When he was asked to tell what he meant by the term "ulcer," he described the picture of something twisted and bulging inside, conveying the feeling that tentacles might be reaching out to affect a large part of his body. As the interview progressed, it became apparent that he was suffering from the hypochondriacal concern with the inside of his body which is so characteristic of the cancerphobe. The casual query about the meaning of the word "ulcer" led straight into the morbid preoccupation of this patient. The degree of concern manifested was a surprising but important diagnostic point.

By contrast, reassurance is one of the most effective methods of preventing further exploration of a given topic. There is an amusing analogy between the technique of massive reassurance, which some well meaning physicians employ with various patients, and the ancient Listerian practice of spraying carbolic acid throughout the operating room during a surgical procedure. There is little doubt that in the absence of any other technique both of these practices are useful, but in modern psychiatry as well as in modern surgery an aseptic technique is greatly to be preferred to an antiseptic one. In both psychiatry and surgery, the preferred technique involves consciously restraining oneself from natural habitual reactions. In both situations the ideal is to introduce nothing into the field which is not there to begin with.

The usual effort of both the surgeon and the psychotherapist is directed toward removing something, and in both cases it is necessary to support the patient in the experience of losing something undesirable. For the most part the support is conveyed by nonverbal means—the manner and behavior of the physician. It is particularly difficult to learn to stay out of the way of the patient in a talking situation, because all the social training to which we have been exposed as children is directed toward avoiding distressing the person with whom we are talking — by-passing awkward silences, and so on. A charming lady who was the guest of honor at a party given by an inexperienced hostess told the latter not to mind about some hitch in the proceedings—that she would cover up with conversation; and she did most valiantly. In acquiring the most information about a patient in the shortest possible time, however, it is often necessary to expose the patient to the distressing effect of silence or inactivity on the part of the interviewer.

Dealing with sore spots

In addition to this general rule, it is important always to be alert to hypersensitivities of any sort. It is never possible to predict the exact response of a patient to a casual remark. An old woman who was having some trouble with her hips asked an internist what the trouble was, and in an offhand way he replied, "Oh, just a little arthritis." A close relative of the patient had been permanently crippled by severe rheumatoid arthritis, however, and she became quite alarmed by her interpretation of the fact that she was suffering from the same disease.

In somewhat the same way we may note a response in certain patients which at times resembles the state of surgical shock. Shock-like states are particularly frequent in this field because of the enormous potential of the idea that a lesion may be malignant. Confirmation of the presence of malignancy is always attended by some degree of emotional disturbance, but where this confirmation is offered prematurely or abruptly, the result is frequently such a disorganization of the whole feeling about the self that the patient feels temporarily stunned, paralyzed, or speechless, and subsequently undergoes a

long interval of numbness and disturbed functioning.

In other cases, however, a conspiracy on all sides to keep the knowledge from the patient frequently results in disturbed relationships within the family and in the doctor-patient relationship. One patient who had nursed her husband through a fatal illness with a lung cancer and was in the hospital with a malignant skin disease said that she had not let her husband talk about his trouble, even though she had lost a financial advantage by not letting him come to a decision of a legal nature. In her current situation she found herself much hampered by her daughter's refusal to let her discuss her own disease.

Emotional States as a Means of Adaptation

We may cite yet another analogy here in pointing out that certain emotional states, especially those of anxiety and depression, function almost like an inflammation; although in themselves disagreeable, they perform a function which is essential for adaptation. In the effort to adjust to any situation, it is necessary to relinquish the previous situation—a process which is attended by greater or lesser degree of depression.

Such signs of emotional inflammation as anxiety and depression usually indicate that the resources of the organism are being mobilized to deal with the threatening situation. As symptoms, they have somewhat the same value to the physician that fever has. The difference is that the feeling or emotion is contagious. The associates of a person with anxiety or depression are themselves prone to be affected. In many instances it can be seen that the effort of a doctor, nurse, member of the family, or friend to alleviate the patient's feeling is, to a large extent, an effort to modify his own distress. It seems to me that this is perhaps the most important aspect of the whole problem, since again, like inflammation, it is not the primary lesion which offers the greatest difficulty in treatment, but the complications which prevent the inflammation from running its natural course.

No drug having been thus far found in the treatment of tuberculosis which kills all tubercle bacilli, the objectives of drug treatment in this disease still fall short of the eradication of all infecting organisms.—William B. Tucker, M.D., *Annals of Internal Med.*, Nov., 1953.

THE LIMP IN INFANCY AND CHILDHOOD

IRA H. RAPP, M.D.

CHARLOTTE

The discussion is concerned with the more common causes of hip lameness, exclusive of poliomyelitis, in infancy and childhood. An attempt has been made to arrange in chronological order those conditions most likely to be manifested at that time. The problem of the limping child constantly confronts the consultant, whether he be general practitioner, pediatrician, or orthopedist. Such a child must always be considered to have a serious hip disease until time and future examination prove otherwise.

Congenital Dislocation of the Hip

A limp arising from a congenitally dislocated hip and discovered while the child is learning to walk indicates a late diagnosis of the disease. Congenital hip disease should be suspected in a brief examination shortly after birth, on the basis of such findings as asymmetrical skin folds, reluctance of the infant to use the affected extremity, and shortening of the leg. The latter is best detected by allowing the child to lie flat on the back and flexing both hips and knees. The affected knee will appear shorter in this position, and will resist full abduction as a result of the tightness of the hip adductor muscles. In the same position, if the child's leg is pushed and pulled, a sense of instability or "telescoping" may be detected, and occasionally the head of the femur can be felt to ride in and out of the hip socket. In bilateral cases, widening of the perineum is quite apparent, and transverse gluteal folds are absent.

The diagnosis of congenital dislocation of the hips is confirmed by x-ray evidence of abnormal hip relations. The neck of the femur is not directed toward the center of the acetabulum, which in turn is abnormally shallow and the roof oblique. Shenton's line is disturbed and appearance of the ossification center of the head of the femur is delayed. In many of the Mediterranean countries where the incidence of congenital dislocation of the hip is higher than here in the United States, routine roentgenograms are

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From the Miller Orthopedic Clinic, Charlotte, North Carolina.

made of all infants at three weeks and three months of age.

Congenital Dysplasia of the Hip

A milder yet similar form of congenital hip disease is congenital dysplasia of the hip. In this entity the developing head of the femur is in contact with the articulating surface of the hip socket, but the acetabulum is shallow and the room oblique. The importance of recognizing this condition lies in the possibility (1) of progression to the true hip dislocation, or (2) of the later development of osteoarthritis of the hip joint. Where the diagnosis of congenital hip disease is made before the stage of weight-bearing or prior to its recognition by limping alone, the treatment is greatly facilitated and can be effected by maintenance of wide abduction by means of a Frejka (pillow) splint or abduction bar. This provides an impacting force and stimulates development of an adequate hip socket. Closed reduction or non-surgical treatment instituted before the age of 3 will provide satisfactory results in the majority of cases.

Congenital Coxa Vara

Another source of painless limp sometimes occurring when the child is learning to walk, but more often appearing quite insidiously several years later, after minor hip injury, is congenital coxa vara. This condition, which may be either unilateral or bilateral, demonstrates a decreased angle between the femoral neck and shaft. Under normal conditions this angle is 130 degrees, but in coxa vara it may be 60 degrees or less. The child presents not only evidence of a painless limp, but, in addition, limitation of abduction and internal rotation. The prominence of the hip or greater trochanter is higher than normal, and in bilateral cases increased lumbar lordosis is marked and the abdomen protuberant. In contrast to congenital dislocation, with which the clinical condition is frequently confused, there is no instability or telescoping of the hip. Conservative treatment is unsatisfactory unless the deformity is mild. Surgical treatment with osteotomy is usually necessary to correct the deformity.

Pyogenic Infection of the Hip

The onset of hip disability following infection of the hip joint is usually dramatic, with systemic signs of sepsis and local signs of inflammation: severe muscle spasm, pain,

and palpatory fullness of the hip joint. The child maintains the hip in a position of flexion and adduction, and will resist all efforts of passive motion. Infection of the joint may occur from a primary focus in the respiratory tract, urinary tract, skin, and so forth, but often may begin as a primary process in the articulation itself. It would seem almost unnecessary to stress to the physician attending a sick child the importance of recognizing the development of a septic hip joint during the course of an illness, the joint infection being the fundamental basis of continued fever and failure to respond to treatment. X-ray changes at the onset, though few, should make one extremely suspicious of hip joint involvement. The joint is distended and the space increased. The shadow of the obturator internus lining the pelvic surface of the acetabulum is displaced inwards. Bone changes, however, are negative. The importance of early recognition of the disease lies in the necessity for immediate relief of capsular distention, which obliterates the circulation to the femoral epiphysis and results ultimately in necrosis of the head of the femur, growth disturbance, and joint ankylosis. The child must be hospitalized, treated systemically with appropriate antibiotics, and locally by immediate hip drainage. The offending bacterium must be identified and sensitivity of the organism determined in order to institute appropriate therapy. The extremity is immobilized in traction in order to overcome muscle spasm and prevent joint contracture.

Tuberculosis of the Hip

Whereas the danger of pyogenic infection of the hip is present from a few days following birth, tuberculous infection of this joint is infrequent under the age of 2, and, in contrast to the acute disability produced by pyogenic joint infection, the onset of limp in a hip affected by the tuberculous process is insidious. Tuberculosis hip disease lacks characteristic features to differentiate it from other subacute or chronic hip disabilities. The limp is usually present in the morning, only to disappear after a few hours, and then to recur after a longer period of activity. This feature is not distinctive. However, the child is generally ill, with a fluctuating low grade fever, a positive tuberculin test, night cries, and suggestive x-ray changes. Initially the roentgen film demonstrates increased joint fluid, with widening of the

joint space, decreased bone density on either side of the articular surface extending well into the proximal portion of the neck of the femur, and haziness of the bone outlines. Later there is narrowing of the joint space and evidence of early destructive bone changes, most frequently in the head of the femur, the medial portion of the epiphyseal line, and upper portion of the acetabulum.

Therapeutic concepts today are changing. No longer is the child with the tuberculous hip committed to years of bedrest and immobilization, awaiting either spontaneous or surgical fusion. With the newer antibiotics—streptomycin, PAS, and more recently iproniazid—we are cautiously observing these cases, and occasionally finding the tuberculous process arrested and joint function preserved. It is still too soon to predict whether these joints are healed or whether the infection will recur and require still further treatment and subsequent surgery. The experiment is an interesting one. The tendency, however, is toward improved hip joint function.

Transient Epiphysitis

One of the most common of all causes of limping in the child from 2 to 10 years of age is an intriguing and poorly understood lesion of the hip joint to which the term "transient synovitis," or "epiphysitis," has been given. To be sure, most cases are transient, lasting for several days; however, others have endured for six to eight weeks, continuously or in recurrent attacks. Still other patients have apparently gotten well, only to exhibit degenerative hip joint changes years later. For the most part, the disease runs a relatively benign course.

The onset is frequently related to trauma, and often a history of upper respiratory tract disease two to three weeks prior to the onset of gait abnormality may be elicited. The child exhibits a chronic intermittent limp, largely unaccompanied by pain. Fever is not a prominent feature and, if present, rarely exceeds 100 F. Examination of the hip reveals muscular spasm and restriction of passive motion, especially on internal and external rotation, but a fixed deformity and marked pain on motion are unusual. Likewise, fullness of the hip joint is difficult to detect, in contrast to that discovered in specific hip joint infection.

The etiology is obscure. Miller⁽¹⁾ ascribed the process to an epiphysitis caused by py-

emic infarcts, and, in a review of 77 cases, indeed discovered 82 per cent of the patients to have infected tonsils, the removal of which facilitated recovery.

A great deal may also be said to substantiate the claim that this is an acute synovial reaction on the basis of hypersensitivity, since aspiration of these joints reveals a slight increase in fluid, the analysis of which exhibits negative cultures and no abnormalities. Roentgenograms made during the first several days are negative. Later the joint space may appear wider than normal, owing to a slight excess of joint fluid, and if the disease persists for a week or longer, the bone surrounding the hip joint may demonstrate decreased density in contrast to tuberculous disease; however, bone outlines remain sharply defined. Although the majority of these hips readily become functionally normal, the child should be followed for possible future hip joint disease, at least through the adolescent period. It is my impression that this so-called benign lesion may be an underlying cause of any unilateral degenerative process of the hip joints discovered after the second decade.

Treatment is designed to relieve muscular spasm and avoid the trauma of weight-bearing. If foci of infection in nose, throat, sinuses or teeth are discovered, these should be removed. The greater number of children with transient synovitis can be treated with bedrest at home and gradually resume weight-bearing with crutches after muscle spasm disappears. Refractory patients with recurrent limp are candidates for hospitalization and traction for as long as muscle spasm or restriction to passive motion persists, before protected weight-bearing with crutches is allowed.

Legg-Perthes' Disease (Coxa Plana)

The hip disability arising out of Legg-Perthes' disease occurs from 4 to 12 years of age. Whereas the sexes are largely equally represented in acute transient epiphysitis, the incidence of coxa plana is higher in males by a ratio of eight to one. The history of coxa plana is of some interest. In 1909 Arthur Legg of Boston described a self-limiting noninfectious disease affecting the hip joints of growing children. Heretofore the disease had been thought to be a mild form of bone tuberculosis, nonprogressive and responsive to treatment. Even today the etiology has not been accurately de-

terminated. However, two factors are apparent: (1) The very fact that the disease occurs mainly in active young boys indicates that injury or activity may be a factor; and (2) the fact that the histopathologic process is that of an aseptic necrosis suggests a circulatory deficiency.

These children have little or no pain. They do, however, present a limp of varying degree. Examination of the child reveals nothing specific; muscular spasm and limitation of passive motion, especially rotation, are discovered as in most intraarticular hip diseases.

X-ray changes quite naturally reflect the progress of the disease. In the beginning an area of radiolucency appears in the femoral epiphysis or neck. As bone necrosis occurs, the femoral head appears dense and later fragmented. When fragmentation disappears and healing occurs, small islands of newly formed bone appear, coalesce, and finally reconstruct smooth bony contours. The time required for the completion of the entire process rarely is less than 18 months, and may require as much as four years.

Weight-bearing must be prevented at all costs. The method whereby this is accomplished, however, should be individualized. Those hips which appear normal both functionally and roentgenographically are found, for the most part, in that group of patients treated by complete bedrest and leg traction. Except in those areas where institutional care and educational facilities are available and accessible, this type of treatment is not feasible. In other areas early hospitalization is desirable, with treatment of the extremity in traction until muscle spasm and restriction to passive motion has subsided. Ambulation with crutches and an ankle sling to prevent weight-bearing on the affected leg may then be permitted. Or the patient may be permitted to walk with a caliper splint which prevents weight-bearing on the hip joint, and a built-up shoe on the unaffected side. The healing process is followed by periodic x-ray studies at four to six month intervals, and careful observation of the uninvolved side for early evidence of the disease.

Adolescent Coxa Vara

(Slipping Upper Femoral Epiphysis)

This disease entity, as the name implies, occurs in the preadolescent or adolescent period, from 9 to 16 years of age and in con-

trast to Legg-Perthes' disease is found more frequently in girls by a ratio of 2 to 1. That the disease occurs only in the fat and genitally underdeveloped child is a misconception, for it is equally common in tall asthenic children and in intermediate types.

The onset of hip disability resembles that of any chronic hip ailment. The limp is intermittent and has daily variations as well as periods of complete absence. Pain may be a prominent feature, or it may be completely absent. When present, this complaint frequently is referred to the knee; therefore a negative knee examination or a symptomatic hip joint in an adolescent, despite a history of chronic limp, is highly suggestive of slipping femoral epiphyses. The only roentgenogram which is of any value in an early case is the lateral view, which demonstrates the typical displacement in a posterior-inferior direction.

The amount of displacement of the femoral epiphysis on the neck will determine the type of treatment to be instituted. As outlined in a previous paper⁽²⁾, manipulation is mentioned only to be condemned, as additional injury is inflicted upon an already jeopardized circulation to the femoral head. Immobilization in bed or by plaster cast is no guarantee against further slipping, and should be resorted to only when surgery is contraindicated. Where displacement of the femoral epiphysis is less than 1 cm., hip-pinning with a Smith-Petersen nail will yield excellent results. Where displacement of more than 1 cm. exists, some type of hip osteotomy, reconstruction, or arthroplasty is to be considered, depending upon the individual case.

Summary and Conclusions

1. The limp as a sign of hip disability must be considered serious until proved otherwise.

2. Congenital hip disease can and should be diagnosed shortly after birth if treatment is to be simplified and results improved.

3. Except in early cases, treatment of congenital coxa vara is surgical.

4. The septic hip demands early treatment in order to prevent circulatory embarrassment to the growing epiphysis.

5. Transient epiphysitis is a benign, poorly understood hip disease, but should be observed for a prolonged interval following remission.

6. Concepts of treatment of tuberculous hips with antibiotics are changing. No conclusions can as yet be drawn.

7. Adolescent coxa vara is a chronic hip disability of adolescence which demands early recognition if near to normal hip function is to be preserved.

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Discussion

Dr. Robert A. Moore (Winston-Salem): I think Dr. Rapp has left out two rather common causes of limping. One is improper shoes and the other is sprain.

Dr. Rapp: Yes. I was previously talking to Dr. Gay, who said that pediatricians cure about 99 per cent of the hip disabilities just by removing a burr or a wrinkle in the shoe. Sprains and other common causes of limping, such as flat feet, did not enter into the discussion, since they arise below the hip joint.

From the floor: What about destructive lesions in the hips such as tumor?

Dr. Rapp: I think that tumors of the hip joints are fairly rare as intra-articular tools. For instance, I am thinking of a case of synovium of the hip joints; however, intra-articular tumors are quite rare in comparison to tumors occurring about the hip joint. There are, for instance, the benign tumors, the most common being the osteochondroma, which presents the symptom of limp and interferes with hip joint function. This tumor is fairly common.

From the floor: We happen to have encountered 1 patient with a lesion of the greater trochanter; it was an osteolytic condition.

Dr. Rapp: Extra-articular tumors present a diagnostic problem. They are in the neighborhood of the growing epiphysis of the greater trochanter and present some difficulty in differentiation.

Therapeutics: In medicine most of our premises are the facts found by research workers, and many of the conclusions from these facts become translated ultimately into ideas about the cause and treatment of disease. Research proceeds now at so great a rate that it is essential that reasoning must keep pace with fact-finding. As much trouble must be taken in reasoning from facts as it is in establishing their truth. Though medical data may not always be subjectable to the rigid application of formal logic, most views on therapy have behind them some attempt at a logical argument. The premises and the arguments are not always expressed openly, so that crooked thinking is often concealed behind an impressive and persuasive array of words (particularly in brochures accompanying proprietary remedies). It is a profitable and useful exercise for all those who wish to think straight to analyse reasoning and weigh evidence by exposing the bare bones of an argument, and see how it looks. Do we not sometimes find that we are being influenced by arguments of this kind: (1) small people do not grow enough, (2) anterior pituitary makes rats grow, (3) therefore small people need anterior pituitary; of this sort: (1) pregnant rats without vitamin E miscarry, (2) therefore women who miscarry need vitamin E? — Asher, R.: Straight and Crooked Thinking in Medicine, Brit. M.J. 2:460 (Aug.) 1954.

GANGRENE OF THE LEG IN AN INFANT

RICHARD MARGOLIS, M.D.

WINSTON-SALEM

Arterial occlusion in the newborn and young infant is an infrequent occurrence. Since 1828 only 58 cases have been recorded in the literature.

Excellent reviews and discussions of the subject have been presented by Dohan⁽¹⁾, Heller and Alvary⁽²⁾, Gross⁽³⁾, and Askue and Wong⁽⁴⁾.

It is the purpose of this paper to add another case to the literature, and to suggest that conservative therapy may be satisfactory.

Case Report

A four day old white male infant was admitted to the James Walker Memorial Hospital, Wilmington, on September 15, 1952, with the complaint that his "leg suddenly became dark." The infant was the product of an uneventful, full-term pregnancy and low forceps delivery. His birth weight was 7 pounds, 6½ ounces. A circumcision had been performed on the third day of life. Approximately six hours prior to admission to the hospital the infant's right leg and thigh were noted to be dark blue. The leg felt cool, and seemed to be acutely painful when touched. A few hours later the dark color decreased in the thigh and the upper part of the leg, and these areas became warmer and pinker. The dark area was then noted to be localized in the middle of the lower leg, the outer aspect being less involved.

Physical examination revealed a well developed, well nourished infant who appeared to be in acute distress. The rectal temperature was normal. The anterior fontanelle measured 3 by 4 cm. and was flat. Examination of the eyes, ears, nose, and throat was within normal limits. The lungs were clear. Auscultation of the heart revealed no murmurs. The umbilicus was clean. A recent noninfected circumcision was noted. The right leg was held in a position of flexion. There was a line of demarcation between the pink upper leg and an area of mottled cyanosis extending from the middle of the leg to the foot. The cyanotic area on the affected

From the Department of Pediatrics, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

Formerly assistant resident in pediatrics James Walker Memorial Hospital, Wilmington, North Carolina.

right leg was cooler than the corresponding area on the left leg. The femoral, popliteal, and dorsalis pedis pulsation were absent in the right leg.

On laboratory examination the urine was found to be within normal limits. The red blood count was 6,200,000, the hemoglobin 18 Gm., and the white blood count 7,150, with a normal differential.

The right leg was sponged with alcohol, and sterile cotton was applied. A stockinette sock was pulled over the padding and pinned to the infant's diaper. This prevented further injury by the left leg. On the third hospital day the inner aspect of the right leg showed a clearly demarcated area of early gangrene. The lateral aspect of the leg appeared much pinker. The femoral and popliteal pulsations were present.

Six days after admission the major portion of the right leg and foot was pinker and warmer. Over the medial malleolus was an area of dead tissue measuring 2 by 3 cm. On the following day this necrotic tissue began to slough, and the patient had a brief febrile spike to 101.4 F. rectally. The sterile cotton was replaced with Furacin gauze. By the tenth hospital day the necrotic area had entirely sloughed. A clean, crater-like lesion measuring 2 by 4 cm. was then present. The medial malleolus was exposed. The foot was swollen, but the color remained good. The wound was packed with a bland ointment containing A and D vitamins, and was allowed to granulate. The excess granulated tissue was cauterized with silver nitrate. The wound filled in rapidly, and the remainder of the hospital course was uneventful. At the time of discharge, 19 days after admission, only a small transverse scar remained over the malleolus. There was no apparent limitation of movement of the right foot.

Comment

In the absence of any congenital heart defect or apparent focus of infection, one can only speculate as to the etiology of the lesion in this infant.

Gross⁽³⁾ calls attention to the ductus arteriosus and umbilical arteries as sources of emboli in those cases which cannot be explained on the basis of sepsis or injury at birth. As no cause could be found to explain the apparent vascular insufficiency, it is possible that an embolus could have been the etiologic agent.

The treatment in this instance followed

the general plan outlined by Gross⁽³⁾. Lumbar sympathetic block with procaine was not attempted because of lack of experience in infants. For a similar reason anticoagulants were not used.

A conservative therapeutic approach to similar cases is suggested, because of the satisfactory results in this case, and because of the difficulties attending more drastic procedures in an infant.

Summary

A case of apparent arterial occlusion in a 4 day old infant resulting in gangrene of an extremity has been presented. An embolus from the ductus arteriosus or an umbilical artery is suggested as the etiologic agent. Conservative therapy brought about a satisfactory result.

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I sometimes wonder if obstetrics shouldn't have joined up with paediatrics instead of gynaecology, and if—in whoring after the glamour of surgery—it hasn't missed the crux of the matter. For the crux surely is not just to deliver a woman but to get a new citizen sound in mind and body. True enough, as the current maternal mortality rate shows, our obstetrical obsession with the mother has been eminently successful. But the fate of the baby is another kettle of fish. Deaths in the first week of life still rank third in Nova Scotia after cardiovascular disease and cancer. We obstetricians must accept responsibility for all but a minor fraction of these since, in effect, most neonatal deaths are obstetrical deaths conditioned by what happens during pregnancy, labour and the immediate neonatal period, when the situation is still in our hands.—Atlee, H. B.: *The First Ten Minutes*, Canad. M.A.J. 70:227 (Sept.) 1954.

* * *

Of all babies the premature should not be detached from its mother until it has got all the blood nature intended for it. Paediatricians like to keep the premature's stomach empty for a day or so and this extra blood is a hostage against hunger. Finally, the premature should be handled with the greatest gentleness; the more premature it is, the more its life tenuous and uncertain—but it has its own powers of survival, powers we may actually hamper if we try to aid them too vigorously. When the cord has been tied, the baby should be placed immediately in an incubator, which should have been brought to the delivery room previously.—Atlee, H. B.: *The First Ten Minutes*, Canad. M.A.J. 71:231 (Sept.) 1954.

THE RESULTS OF ACETYL GANTRISIN THERAPY IN ONE HUNDRED PATIENTS WITH URINARY TRACT INFECTION

FRED K. GARVEY, M.D.

and

HOWARD E. STRAWCUTTER, M.D.

WINSTON-SALEM

Gantrisin is a well established sulfonamide preparation which is highly soluble and of low toxicity. It is a satisfactory urinary tract antiseptic, and is extremely well tolerated.

A recently synthesized acetylated derivative of Gantrisin was submitted to us for clinical evaluation. Preliminary studies indicated that it is equally effective and even better tolerated than the original product. Chemically this compound differs from naturally occurring acetylated sulfonamides, which are usually of relatively low activity, in that the acetylation is in the N1 rather than the N4 position.

Materials and Method

Acetyl Gantrisin in this study was administered as a urinary tract antiseptic to patients with the various types of infection seen in an office practice of urology. No other selection of patients was made. The results were evaluated on the basis of clinical response—that is, relief of symptoms, elimination of pyuria, prevention of infection from instrumentation, and duration of illness. Cultures were obtained only when indicated in the course of the clinical evaluation of the patient. The usual dosage was 0.5 Gm. four times a day, with proportionate reduction for children and other minor individual variations. In violent infections the average adult was given 1.0 Gm. four times a day during the acute phase. Blood studies for evidence of bone marrow depression were not made. These had previously been done with regard to Gantrisin without revealing any evidence of hemapoietic toxicity.

Results

Of one hundred patients to whom the drug was given and who have been followed sufficiently to allow evaluation, 91 showed definite improvement. Results were regarded as

fair in 25 cases, and ranged from "good to excellent" in 66.

Fifty-nine cultures were obtained. The incidence of various offending organisms with corresponding effectiveness of the drug is shown in table 1. The difference in total numbers is due to the presence of mixed infections.

In 2 patients, fever and chills developed on the first day of treatment, subsiding when the drug was stopped. Both patients had previously received large doses of sulfa drugs, and one had evidenced a similar reaction to a sulfa preparation previously. No other untoward reactions were noted.

Eight patients showed equivocal or no clinical improvement following a course of Acetyl Gantrisin therapy. Two of these patients had had transurethral resection of the prostate with persistence of pyuria beyond the expected period, and had not responded to other chemotherapy. The infections were eventually cleared with other types of medication and instrumentation. Three patients with pyelonephritis, one due to pseudomonas infection, one associated with stones, and one in an atrophic pyelonephritic kidney, showed no apparent improvement. These had also received various other forms of chemotherapy previously. Another patient with bladder invasion from squamous cell carcinoma of the cervix had no decrease in pyuria or in symptoms. One patient receiving Acetyl Gantrisin prophylactically following manipulation of a ureteral stone, had acute pyelonephritis in spite of medication. It was felt that the dosage was inadequate in this case.

Response of organisms

Some astonishing facts were noted in an analysis of the results in relation to the different types of organisms involved. Proteus, aerobacter, and pseudomonas infections responded quite favorably to Acetyl Gantrisin. These organisms are most difficult to eradicate in the urinary tract, and have given virtually no response to antibiotics and most of the other sulfonamides. Of the 9 cases with proteus, 8 were cleared satisfactorily, and one showed fair response. There was 1 failure in the 8 cases of aerobacter and 1 failure in the 5 cases of pseudomonas. The number of failures is low enough to encourage the use of this drug in preference to other therapy. Coliform infection responded well to Acetyl Gantrisin ther-

From the Department of Urology, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

Table 1

Results in 69 Cases of Urinary Tract Infection
Treated with Acetyl Gantrisin

Organism	Results			Total
	Good	Fair	None	
Coliform	26	5	—	31
Proteus	8	1	—	9
Aerobacter	5	2	1	8
Pseudomonas	3	1	1	5
Alkaligenes	2	—	—	2
<i>Streptococcus fecalis</i>	2	—	—	2
Diphtheroid	—	—	1	1
Staphylococcus, hemolytic	1	—	—	1
Staphylococcus, non-hemolytic	1	—	—	1
Paracolon	1	—	—	1
<i>Streptococcus</i> <i>liquifaciens</i>	—	—	1	1
No growth	5	—	2	7
	54	9	6	69

apy, which was the expected norm for this infection. *Streptococcus fecalis*, which is ordinarily an extremely difficult organism to eradicate from the urinary tract, responded with complete clearance in the 2 cases treated.

Summary and Conclusion

1. One hundred patients with urinary tract infection were treated with an acetylated Gantrisin derivative.

2. The results were evaluated clinically. There was either a cure or satisfactory relief following administration of the drug in 91 per cent of the cases.

3. There were 2 febrile drug reactions which abated when the medication was stopped. One patient was definitely known to be sensitive to sulfa drugs before the administration was started.

On a basis of this experience we feel that Acetyl Gantrisin is an effective and safe drug for use in the treatment of urinary tract infection.

The G.P. finds himself to a large degree side-tracked. He is today a "filter" (the word has actually been used in official reports), a sieve with a very large mesh. He spends much of his time signing forms by which he unloads his patients upon institutions and specialists who know little of the early history of their diseases and nothing at all of their domestic conditions. No health centres have, as yet, after four years, been set up. Or is it one? There is much less post-graduate instruction than there was five years ago. More serious still, the "close-up" between doctor and patient, which we had learned to be the *sine-qua-non* of medical care, has been grossly interrupted. Less and less do they see of each other, whether in the home, in the doctor's office, or in the hospital.—Horder, L.: Fifty Years of Medicine, New York, Philosophical Library, 1954, p. 46.

ABDOMINOSCROTAL HYDROCELE

A Case Report

ROBERT W. WILLIAMS, M.D.

WILMINGTON

Although by no means unknown, abdominoscrotal hydroceles are sufficiently uncommon to merit mention. Until 1942 Prather⁽¹⁾ was able to collect but 53 cases. The reader is referred to this article for a review of the history and pathogenesis of this lesion. The 53 cases presented included patients from ages 1 to 55 years. The present report is intended to add to the literature 1 case in which the patient was 77 years of age.

Report of a Case

A 77 year old white farmer presented himself at the emergency room of the North Carolina Baptist Hospital complaining of swelling of the left leg and pain in the left calf for some two to three weeks. In addition he stated that a mass had been present in the right side of the scrotum for as long as he could recall. He had consulted his physician 10 days prior to admission, and the scrotal mass had been aspirated and an unknown amount of dark brown liquid obtained. The past history, family history, and systemic review were singularly unremarkable.

Examination revealed an elderly white man, alert, cooperative, and remarkably agile for his years. Blood pressure was 190 systolic, 74 diastolic. The remainder of the general examination was entirely within normal limits save for the abdomen and scrotum. Here there was a huge rounded mass filling most of the abdomen up to the costal margins. This mass was movable, non-tender, dull to percussion, and with an obvious fluid wave. In addition, it was continuous with the cystic mass in the right scrotum. This mass was 15 to 18 cm. in diameter, and the right testicle could not be definitely felt. The left testicle was readily palpable and unremarkable. A fluid wave was transmitted from the scrotal mass to the abdominal mass, and vice versa. The scrotal mass could not be transilluminated. Rectal examination revealed a large extrinsic smooth mass, which was easily indentable. There was a trace of edema of the left foot and ankle, but no tenderness, color change, or temperature change.

Routine blood count, urinalysis, and serology were all within normal limits. The



Figure 1

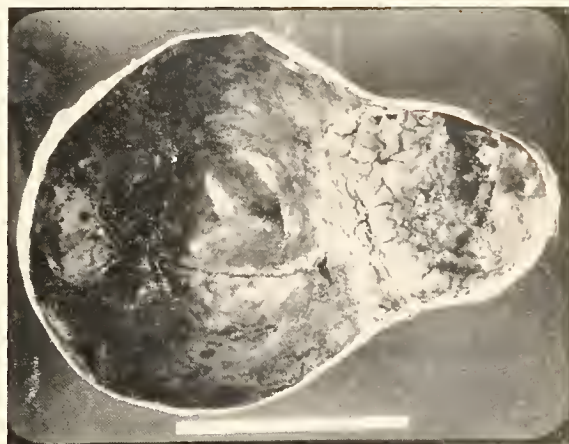


Figure 2

stools were negative for occult blood; the total serum protein was 7.7 mg. per 100 cc., the blood urea nitrogen 9 mg. per 100 cc., and the serum amylase 80 units. Plain films of the abdomen in the erect and recumbent positions demonstrated a huge area of radiodensity of similar distribution to the palpable mass. Upper gastrointestinal x-ray films and barium enema showed marked displacement of the stomach, colon, and loops of small bowel into the immediate subdiaphragmatic spaces, but no intrinsic lesions. Intravenous pyelograms indicated minimal distortion of the course of the right ureter, but no other changes, and there was prompt appearance of the dye bilaterally. An electrocardiogram showed changes interpreted as probably indicating left ventricular hypertrophy.

Three days after admission the patient was operated on under spinal anesthesia; a lower right paramedian incision was employed. The anterior peritoneum was adherent to the surface of the large mass, but could be easily separated by blunt dissection. The remainder of the peritoneal cavity was free, and exposure of the mass revealed that it was retroperitoneal, and had stretched and pushed the posterior peritoneum over its surface. This layer was then incised in the shape of a T, with the horizontal incision at about the level of the inguinal ligament. A cleavage plane was entered, permitting the mass to be stripped free of its peritoneal covering. One attempt to deliver the mass partially was unsuccessful because of its size. It was then decided to evacuate some of the contents. A 2 or 3 cm. incision was made on the anterior aspect, and 6,400

cc. of thick, yellowish-brown, somewhat greasy fluid was aspirated. When this had been done, the large fibrous sac could be folded and delivered through the wound. The scrotum was then invaginated, and by careful blunt and sharp dissection, the scrotal portion of the sac was separated from the right testis and spermatic cord structures. The cremasteric muscle fibres were so attenuated as to be unidentifiable, but the vas deferens and spermatic vessels could be pushed aside. In the region of the epididymis the wall of the sac was intimately fused with this structure, necessitating sharp dissection. Some of the vasa efferentia were doubtless injured, but in view of the patient's age and the certainty of the blood supply to the testis this complication was of little concern. The entire sac was thus removed. The structures of the inguinal ring and ligament were thinned out to a flimsy flat band of tissue, and the huge inguinal hernia could only be repaired by suturing the thin fibrous tissue, along with the subcutaneous tissues, to Cooper's ligament. The posterior peritoneum was then closed with a running suture of no. 00 chromic catgut and left redundant. A small Penrose drain was placed at the estimated level of the inguinal ligament and brought out through a stab wound at the bottom of the scrotum. The abdominal wound was closed in layers with interrupted silk sutures.

Pathologic report of the specimen was huge simple cyst compatible with hydrocele.

The postoperative course was uneventful; the wound healing per primam, and showing no evidence of immediate herniation. The swelling in the left leg disappeared, and the

patient was discharged on the ninth post-operative day. When seen 10 days later in the outpatient department, he was found to be free of signs and symptoms.

Comment

Prather has concisely described the probable mechanisms that result in the formation of this lesion. The present case was entirely in keeping with this description, and even after the specimen was removed it assumed the bilobed shape, with a huge abdominal component and smaller scrotal one, the indentation between reflecting the compression of the inguinal ligament. The more highly colored and thicker than usual contents of the sac are not easily explainable, as the entire lining appeared to consist of simple flat epithelial cells. A few areas showed marked degenerative changes of the fibrous tissue wall. This suggests an explanation for the nature of the contents, although, because of the huge size of the sac, it was not feasible to subject every area to microscopic study. Dermoid cyst was considered as a diagnostic possibility for a considerable time, but was excluded by the careful pathologic study.

Summary

An additional case of abdominoscrotal hydrocele has been submitted. It is of interest that the patient was successfully treated by surgery at the age of 77, and that the contents of the sac suggested the possibility of a dermoid cyst grossly. It is felt that with the safer anesthetic techniques and supportive measures of current practice, surgical excision is the preferable treatment for these lesions.

References

1. Prather, G. C.: Abdominoscrotal Hydrocele; Review of the Literature and Report of a Case, *New England J. Med.* 226:235-260 (Feb. 12) 1912.

The general practitioner in England: Between 8 and 9 o'clock in the morning he will be taking his breakfast and answering telephone calls for visits. He will be in his surgery promptly at 9, and will see patients until, say, 10:30. This is an average time, during which he will see up to 25 patients. There will be a bit of everything most days. Perhaps 20 of the patients will have minor ailments or come for follow-up, or be calling merely for a certificate. The other five may be more interesting from the clinical point of view and need more attention. Thus he may spend 15 minutes on one patient and then quite properly deal with the needs of five or six other during the next 15 minutes.—Hadfield, S. J.: A Field Survey of General Practice, 1951-2, *Brit. M. J.* 685 (Sept. 26) 1953.

BUSINESS MANAGEMENT OF MEDICAL PRACTICE

HORACE COTTON

CHARLOTTE

One of the less dramatic — but perhaps more significant—developments in the private practice of medicine since the end of World War II has been the realization by individual physicians that there is a business side of medicine.

The increasing complexity of government regulations in regard to such matters as wages, social security, workmen's compensation, and taxes has jolted many doctors into recognizing that the federal government, at any rate, regards the practice of medicine as an enterprise. It is an enterprise, moreover, which does not enjoy all the reliefs granted to commercial and industrial enterprises. There are few business undertakings which require such long and expensive preparation as does a medical practice, and few which receive such unfavorable tax treatment during a relatively short productive period, with allowance for the initial investment.

Gradually, the physician has come to see that, much as he may dislike the business side of medicine (and the dislike is greatly to his credit), ordinary prudence demands that sensible procedures, conformable to the requirements of good business, make their entry into his office.

What is Being Done

The gospel of good business practice in medicine is not new. The publication *Medical Economics* has been preaching it for many years, and probably is higher in the regard of the profession today than at any other time. In Michigan, Henry C. Black and Allison E. Skaggs have been contributing to the state medical society journal for more than 17 years. More and more medical schools are providing lectures on the business side of medicine. Some hospitals are furnishing lectures and discussions to their interns and residents. The American Medical Association recognizes the problem. State societies are sitting up and taking notice. Much can be done—and is being done—to

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improve the standards and the training of the personnel of doctors' offices.

There is even a welcome retreat from the philosophy of the "poor mouth." For years many physicians have been reluctant to admit financial success, being apprehensive that the public might think they are doing too well and that the politicians might think the profession ripe for socialization. More doctors now admit their own right to earn an income which, after taxes, will permit them to enjoy benefits comparable with those enjoyed by their contemporaries, both in terms of money and leisure time.

Principles of Good Office Management

Good business management consists of many things, only a few of which can be mentioned in this article. Some of the statements made here may seem trite because they are so obvious, yet many physicians seem to be innocent of them. We would venture the flat statement that even a little time spent in the study of these simple matters would produce an increase in net income and save some working time for any doctor who has been negligent in these respects in the past.

Why does a business concern pay so much attention to the design of its factory or its offices? It wants to eliminate travel, because travel-time is not productive. Also it wants to provide for normal expansion. These things are important in the medical office, too. Why not eliminate unnecessary steps? Why not provide for growth? See that the reception room is big enough, light enough, cheerful enough. See that appointments and money matters can be arranged in privacy. Be sure to have enough examining rooms and equipment to handle peak volume without confusion and loss of time. Don't walk half a mile a day for the lack of another telephone extension.

Why do business men use office appliances? When an office machine can do a job better, faster, or less expensively, business buys that machine. So it should be with the doctor. Any old typewriter will not do. Laborious manual addition of columns of figures does not pay. Stenography is a dying art, it seems, and dictating machines are now standard equipment.

Does the physician have well trained assistants? Commerce and industry have found that it pays to devote sufficient time to train-

ing employees. The doctor may well take note of this.

Does he work by appointment? His appointments should be properly timed, not haphazardly scheduled. He should have breathing spells during peak periods. Patients should be greeted promptly, reassured, seen quickly. The physician should control his patient flow. Too often he is controlled by it.

Records

Do the doctor's records satisfy government requirements? Do they tell what he needs to know for the good management of his practice? They should be simple, for writing things down two or three times when once would do is a great waste of expensive time. The doctor should have regular reports which keep him informed of his progress. He personally should not do the detail work of recording; too often he and his wife do it at home. His personnel should account for all funds. He should be in a position to compare his figures with good experience elsewhere.

Financial records must be complete, up-to-date, capable of being maintained with the minimum of pen-pushing. Statements must be sent out promptly and regularly. Promises to pay must be recorded and followed up. The doctor must know his collection ratio; it can be too high as well as too low. Perhaps the doctor uses stickers on his bills, or scribbles notations in his own hand. Some doctors try every fly-by-night collection agency which asks for business, instead of utilizing sound and ethical concerns.

Insurance

The doctor should determine his business and professional risks, and cover them adequately with insurance. The choice of coverage alone is a difficult matter, since so much is available.

Fees and Overhead

The doctor should realize that there is a proper fee for every service—neither the highest nor the lowest—which produces the greatest return. It is the fee which the majority of patients pay willingly. It should be established for each individual physician. Fees should be consistent with each other, with the community, with the competition.

Then there is the question of overhead. The doctor should know exactly what his overhead is. He should know whether it is

"in line." Sometimes an increase in overhead produces a higher net income. The doctor should know that other enterprises could not stay in business without cost accounting, and he too, without being elaborate, should have some breakdown of his costs.

The control of overhead is a vital factor in increasing net income. Statistical studies made on hundreds of medical practices and kept up to date are available as a background of experience upon which to work. The individual doctor can be told whether his overhead is too high or too low, based on his particular type of practice, the area in which he practices, whether he is practicing as an individual or as a member of a partnership or in a group. Where his overhead varies from the normal, the cause of the variation can often be pinpointed.

Some general comments on overhead may be of interest. In general, the higher the volume, the lower the overhead, and vice versa. For example, in general practice (which is typical of the average of all practices) the overhead may rise to 40 per cent with average volume. With high volume, it should not exceed 35 per cent. The overhead in surgical practice is considerably less than in medical practice, partly because the volume is greater and the fees higher, partly because the surgeon requires less (and less costly) equipment.

In analyzing overhead, it must be remembered that attention must be given to any one item which is out of proportion to the others. If all items seem to be high, the inference is that the volume is too low. Yet it is often true that the doctor with a low volume is extremely busy. The answer may be that he is wasting his time. Or it may be that his fees are too low and he is working a full day for a half day's pay. And if his collection percentage is not in the middle nineties, he needs some help.

In a typical practice, rent may be expected to consume 4 or 5 per cent of the gross receipts. If the doctor is spending more than 8 per cent on rent, he is probably spending too much. Salaries to office help might run around 12 per cent of the gross, less in some practices. If salaries get above 15 per cent, a review is in order. Variation in rates of pay will not usually account for differences of this magnitude: the key usually is the number employed.

Management of Net Income

A "typical" doctor will spend up to 50 per cent of his net income (professional gross less overhead) for his personal living expenses. He will need probably 10 per cent more for life insurance. Uncle Sam will want 25 per cent or more. The physician is going to be fortunate if he can set aside 15 per cent for the rainy day.

Then there is the extreme importance of good business management in the home, in the investment of surplus, in the planning of the doctor's estate. This is, in brief, the management of the "take-home pay." The doctor and his family should know what they are doing, and know whether it is good or bad in comparison with other experience. The doctor should use good counsel in regard to insurance, investment, banking, and taxes.

Conclusion

Good management of the business side of medicine is more than a necessary evil. It can be an instrument for good. It can help provide better medical care for more people at a fair price. It can provide the physician with more time for the amenities of living. It can provide the physician with more net income. It can free him from much of the worry which inevitably is present when he is "navigating by the seat of his pants." And, utilized fully, good practice management can reduce the too-high number of young medical widows.

1955 Radio Health Shows Announced

Doctors of America again will plug better health on the air waves as the A.M.A.'s Bureau of Health Education announces its 1955 radio transcription plans. Three new program series will be developed for use of state and county medical societies over local radio stations.

With the cooperation of the Rocky Mountain Radio Council, A.M.A. will make available about April 15 a special series of 13 medical "whodunits" entitled, "Dr. Tim Detective." This series tells the story of two youngsters who help the doctor solve interesting and mysterious medical cases. For example, one involves a criminal who betrays himself because of what he does not know about diabetes.

Another series to be released about June 15 will be based on A.M.A.'s week-day Chicago television program, "The Doctor Answers." Tapes will be made of 13 of these shows in which Elizabeth Hart (WBKB-TV women's commentator) asks pertinent health questions of Bureau staff doctors W. W. Bauer (director) and W. W. Bolton.

The final series—dealing with new developments in various medical specialties—will be completed about September 15. Top-flight authorities in such fields as geriatrics, mental health, cancer, polio, arthritis, and obstetrics will be featured.

Further details will be announced later.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

FEBRUARY, 1955

WUNC-TV, CHANNEL 4

An article in the *New York Times Magazine* for December 19 by Dr. Constance Warren bore the significant title: "TV Can Solve Our Educational Problem." Dr. Warren, a former president of Sarah Lawrence College, is a member of the Advisory Council of the National Citizens Committee for Educational Television; hence she can speak with authority. In her opening paragraph she pointed out that Johann Gutenberg did not know, when he invented movable type, that he had laid the basis for modern education. By analogy, the men who made possible television, without knowing it may have found a solution for the problem of higher education for future generations. According to Dr. Warren, it is a too-conservative estimate that by 1970 there will be a 100 per

cent increase in the present demand for college education. To meet the demand by doubling college buildings and equipment would cost at least 12 billion dollars, and the problem would be still further complicated by the need for teachers.

The answer, Dr. Warren said, "is not more halls covered with ivy, but TV sets—both on and off the campus." She thinks that this solution would also remove the necessity of compressing a higher education into certain time limits. "We have been given time to eradicate the ills of the insufficiency of time. With the added advantage of time as a factor it will be possible to adapt a curriculum to the leisurely pace of a man's life span."

The student could continue to study all his life, and the true student will continue to do so without urging. The wide application of television as an educational medium should stimulate many to respond to Osler's dictum: "The hardest conviction to get into the mind of a beginner is that the education upon which he is engaged is not a college course, not a medical course, but a life course, for which the work of a few years under teachers is but a preparation."

It should be a source of pride to all North Carolinians, whether or not they are alumni of the Greater University, to know that on January 9—only three weeks after the publication of Dr. Warren's article—the Greater University formally opened its educational television network over Channel 4—the first educational TV network in the United States. The Warren article pointed out that, of 252 channels being reserved for educational purposes, only eight were then being used for TV educational stations. The fact that the WUNC operates from three stations—Chapel Hill, Raleigh and Greensboro—makes valid the claim that it is the first *network* in the country devoted strictly to educational purposes. Many of those who have listened to some of the programs have commented on their excellent quality, and on the refreshing absence of commercial announcements.

It may be recalled, also with pride, that the University of North Carolina was a pioneer in another educational venture many years ago. In the mid-twenties certain members of its faculty conceived and put into action the policy of carrying medical education to practitioners, who came together at convenient centers for a combined lecture and clinical demonstration program. These

courses were given by bright young medical teachers who covered the territory assigned them in circuit-rider fashion, speaking to a different group every day in the week. This pattern was copied widely throughout the country.

All loyal citizens of North Carolina have a right to feel proud of WUNC, Channel 4, and to wish for it the greatest possible success. The effort should be reflected in a continually rising level of education in our future citizens.

* * *

THE OPTOMETRY EXECUTIVE COUNCIL APOLOGIZES

Human nature is so constituted that it is hard for the average man to admit a mistake, and still harder to apologize for one. It often requires more courage to offer an apology than an insult.

This bit of philosophy was stimulated by a marked copy of the *American Journal of Optometry and Archives of American Academy of Optometry* which recently came to the editorial office of the NORTH CAROLINA MEDICAL JOURNAL with a marked editorial. This particular editorial was a handsome apology by the Executive Council of the Academy of Optometry for an unsigned editorial in the *Southern Optometrist* for November, 1954, criticizing severely an article written by the distinguished ophthalmologist, Dr. William Benedict, of Rochester, Minnesota, as one of a series for lay readers sponsored by the American Medical Association in *This Week*. The editorial stated:

The Executive Council of the Academy finds that the article in question is unbiased and fair, and that it is informative to lay readers and further feels that it will serve the purpose for which it was written—that of conserving vision.

The Executive Council of the American Academy of Optometry wishes to go on record as disapproving the unsigned editorial *No Friend of Optometry* in the SOUTHERN OPTOMETRIST and expresses to Dr. Benedict and to all ophthalmologists our apologies and regrets that such an attack could have appeared in a publication professing to serve optometry.

This JOURNAL is pleased to call attention to such a generous tribute to a medical man, and incidentally to note that a North Carolinian—Dr. John D. Perry, Jr. of Winston-Salem—was elected president of the American Academy of Optometry.

DR. ROY NORTON HONORED

At the annual meeting of the Association of State and Territorial Health Officers held in Washington, December 6-10, our own Dr. J. W. Roy Norton was elected president. This announcement comes as no surprise to his many friends, for Dr. Norton has done a splendid job as State Health Officer since he succeeded Dr. Carl Reynolds in 1948.

This JOURNAL, on behalf of the doctors in North Carolina, extends heartiest congratulations to Dr. Norton on this well deserved recognition.

* * *

LOWEST DEATH RATE— HIGHEST NUMBER OF BIRTHS

While statistics are proverbially dull reading, a news release from the United States Public Health Service for December 29 should interest almost everyone. Surgeon General Leonard A. Scheele predicts, on the basis of vital statistics reports for the first ten months, that we may expect for 1954 the lowest death rate and the largest number of births in the history of our country.

The death rate is expected to be 9.2 per 1000—a substantial drop from the rate of 9.6-9.7 reported over the past five years. For the first time in its history, more than 4 million births will be reported for the United States.

Another cause for optimism is that divorces in the first nine months of 1954 were 4 per cent less than in 1953, and 40 per cent less than the 1946 peak. It is to be hoped that this decline in divorces will continue, so that fewer children will have to be reared in broken homes.

* * *

DUKE HOSPITAL ADMISSIONS PASS THE HALF-MILLION MARK

When the teaching hospital of the Duke University School of Medicine opened its doors on July 21, 1930, 17 patients were admitted. In the 24 years since then, the Duke medical center has steadily grown in wisdom and in stature. It was appropriate that the five hundred thousandth patient was admitted shortly before Thanksgiving Day. The steady increase in outpatient visits, both to the public and to the private clinic, has kept pace with the increase in hospital admissions. This steady growth is a tribute to the good work done by the Duke medical faculty and hospital staff.

Committees and Organizations

ADVISORY COMMITTEE TO THE NORTH CAROLINA STATE BOARD OF PUBLIC WELFARE

STERILIZATION— THE NORTH CAROLINA PROGRAM*

What is sterilization?

1. Is sterilization a method for preventing conception?
Yes. It is an accepted method for those who need and desire a permanent rather than a temporary method for preventing conception.
2. Does it involve surgical procedure?
Yes. The prevention of conception is brought about by the doctor closing a small pair of tubes in either the man or the woman to prevent the meeting of the sperm and the ovum.
3. Is it the same as castration?
No. Castration involves the removal of the reproductive glands (the testicles in the male, the ovaries in the female). Castration may or may not have undesirable effects, depending on the age of the patient when the operation is performed.
Sterilization does not involve the removal of glands or organs. Since no gland tissue is removed, it should not have any unfavorable effect on the individual's sex life.

How will sterilization affect the individual?

1. Is it a dangerous procedure?
No. It is comparable to an operation for appendicitis. For a woman the usual procedure is to make a small abdominal incision so that the tubes may be cut and tied.
For a man the procedure is to make a short incision on the side of the scrotum so that the spermatic cord can be cut and tied. The incision is made only through skin and is no more dangerous than any other small cut.
2. Will it affect a man's sexual characteristics?
No. The normal sex urges and abilities are not affected.
3. Will it affect a man's general health?
No. It will cause no change, good or bad.
4. Will it produce symptoms of the menopause in a woman?
No. Closing of the tubes does not affect hormone production, the decrease of which causes the menopause.
5. Will it stop menstruation?
No. The closing of the tubes will not disturb the hormone secretion of the glands.
6. Will it affect a woman's sex response?
No. If the fear of pregnancy is removed, a woman's sex response may be more normal.
7. How long will a patient need for recuperation?
A woman usually does not need more than a week.
A man only about one or two days.
8. Can a woman be sterilized at the time her baby is born?

Yes. It is a common procedure when sterilization has been ordered to close the tubes within 48 hours after the baby is born.

Who may be sterilized under the provisions of the Eugenic Sterilization Law of North Carolina?

1. The Eugenic Sterilization Law of North Carolina provides specifically for the sterilization of three types of cases upon authorization of the Eugenics Board. These are the "feeble-minded, epileptic and mentally diseased."
(a) Patients who have one of the three above diagnosis should be considered for sterilization:
(1) When it appears to be in the best interest of the mental, moral, or physical condition of the patient.
(2) When it appears to be for the public good that such individual be sterilized.
(3) When such individual would be likely unless sterilized to procreate a child or children who would have a tendency to serious physical, mental or nervous disease or deficiency.
(4) When such individual would be unable to provide adequate guidance, care, and support for a child or children.

The basis for sterilization as provided by the North Carolina law must be distinguished from the operation that a physician may perform which is essential to the health of his patient and results in sterilization for therapeutic reasons.

How can sterilization be arranged under the Eugenic Sterilization Law?

1. How is a legal proceeding instituted?
By filing a petition with the Eugenics Board.
2. Who is responsible for filing a petition?
(a) For the sterilization of individuals in State penal or charitable institutions, the executive head of the institution is responsible for filing the petition.
(1) The county superintendent of public welfare may act as petitioner for individuals on parole from a state mental institution.
(2) The county superintendent of public welfare may act as petitioner for an individual in an institution when authorized to do so by the head of the institution. (In such instances the request should be made in writing by the head of the institution to the county superintendent of public welfare and a copy of the letter sent to the Executive Secretary of the Eugenics Board. This procedure would be followed only when the institution does not have facilities and does not have funds to pay the surgeon's fee or for care in a private hospital.)
(3) For the sterilization of individuals in county institutions the executive head of the institution or the county superintendent of public welfare is responsible for filing the petition. Usually the county superintendent of public welfare will be the petitioner since it will be necessary for his office to arrange for the medical care in cases where the individual or his family are unable to pay for the operation.
(b) For the sterilization of the non-institutional individual, the county superintendent of public welfare is responsible for filing the petition.

*This paper has been prepared by the Eugenics Board of North Carolina for the purpose of answering questions most frequently asked about sterilization. These questions relate to the type of operation, its effects, for whom to recommend sterilization, and some of the procedures for working with the patients and their families. It is intended to help the persons administering the program to the extent that they will be able to give the people immediately concerned an understanding of what is involved in the sterilization process and an appreciation of its protection in appropriate situations.

This information supplements rather than takes the place of the Manual of Policies and Procedures of the Eugenics Board. The latter should be followed for legal procedure.

3. On what is the petitioner's decision, i.e. the decision of the head of an institution or of the county superintendent of public welfare to request sterilization, based?

The petitioner should have a current social history which includes social, mental, physical, and environmental information relating to the individual concerned. In considering these data the petitioner looks for factors that will reveal the individual's fitness for parenthood.

This history should give information such as:

- (a) Evidence that the individual is either "feeble-minded, epileptic, or mentally diseased." This requires a psychological examination which makes a finding of mental deficiency in the case of "feeble-mindedness," a report of a physical examination of a nature to determine the disease of "epilepsy," or a report of a psychiatrist which gives a specific diagnosis of mental illness in the case of "mental disease."
- (b) A report of a physician based on a recent physical examination of the individual concerned which states the general health of the patient, calls attention to any complications that might make the operation of sterilization inadvisable, and gives an opinion as to the possibility of reproduction on the part of the individual.
- (c) The ability to love, care for and support a child or children—personal characteristics, occupational interests, family and other environmental influences presented in a way that will show the individual's ability to use native capacity and to cope with whatever disabilities he may have.
- (d) The extent to which members of the individual's family are suffering from mental deficiency, mental illness, epilepsy, and other disabilities.
- (e) The result of a conference with the physician who would be the one to sign the petition, thereby recommending the operation of sterilization.

Finally the record should give a summarized statement based on the findings of the study clarifying why this operation is thought to be for the best welfare of the individual and the family unit.

The securing of proper consent is an important part of the decision to petition for sterilization.

- (a) The determination of the person's eligibility for sterilization precedes the signing of consent.
 - (b) It is assumed that the individual's immediate family or next of kin have taken part in the plan leading to the decision for sterilization. In this case they have had an opportunity to develop confidence in the petitioner and physician and others working with them in this connection. This close working relationship has its value in preparing the relatives to accept the meaning of sterilization as it relates to the particular situation. The signing of consent should be much easier under these circumstances.
4. What is required in the preparation of the petition?

The actual preparation of the petition following the decision to present a petition, including the securing of consent, is a simple process provided the essential information is available through the social history. The information pertinent to the decision to submit the petition should be summarized in Eugenics Form 7, Supplement to the Petition. The diagnosis of either "feeble-minded, epilepsy, or mentally diseased"

should be verified by the reports of a psychologist, a physician who has made a specific examination to determine epilepsy, or a psychiatrist.

The petition is signed by the petitioner and verified by his affidavit.

The final action in executing the petition is taken by the physician as he makes the diagnosis, recommendation, and signs the affidavit of physician. This action of the physician is based on actual knowledge of the case.

5. What is the petitioner's responsibility following the order of the Eugenics Board?

It is the petitioner's responsibility to arrange with the patient, the next of kin, and the surgeon for the operation following the receipt of the order of the Board.

This is the time when the individual and the family face the real test of their decision to go through with the operation. Certain reactions to the anticipated hospital experience are recognized as normal. The petitioner should be prepared to give help at this time and in doing so strive to help the patient distinguish the normal reactions from unrealistic fears and superstitions. If the team composed of the petitioner, the patient and family, and the physician continue to work together, this process will be less complicated.

The petitioner signs the order of the Eugenics Board and gives it to the surgeon who is to perform the operation.

The petitioner makes sure that the surgeon understands the type of operation that is authorized by the Board.

The petitioner reminds the surgeon of his responsibility for signing the order and returning it to the Eugenics Board following the operation.

6. What is the role of the petitioner following sterilization?

1. The petitioner sees that service is continued in keeping with the individual's needs. Some people will be able through the help of the family or friends to make satisfactory arrangements for themselves. Others will continue to need help through the welfare department.

2. Children of the individual sterilized should be given consideration according to their individual needs. This would include medical and psychological examinations as indicated.

NORTH CAROLINA MEDICAL CARE COMMISSION

Summary of the Construction Program of the Medical Care Commission and Future Needs of North Carolina

The North Carolina Medical Care Commission began surveys July 1, 1945, to ascertain the need of medical and hospital facilities in North Carolina. However, funds for hospital construction and most other activities, from state and federal governments, did not become available until July 1, 1947. The Commission's over-all activities for the succeeding seven years to June 30, 1954, have involved the encumbrance of more than \$80 million. The Commission's expenditures for the administration of this program have averaged less than one per cent of the encumbered funds.

The Commission, since July 1, 1947, has sponsored 192 construction projects, of which 89 were local general hospitals—43 new hospitals and 46 additions to existing hospitals, 37 nurses' residences to serve hospitals, and 57 health centers to provide

EXHIBIT A

Table 1

**Seven Years of Hospital Construction Under
North Carolina Medical Care Commission's
Program to June 30, 1954**

PROJECTS	COMPLETED			UNDER CONSTRUCTION			IN PLANNING STAGES			TOTAL		
	Number	Beds	Costs*	Number	Beds	Costs*	Number	Beds	Costs*	Number	Beds	Costs*
Local General Hospitals	68	3,817	\$51 1/16	8	414	\$5 1/3	13	444	\$6 1/2	89	4,675	\$63
Local Nurses' Residences	34		6 2/5	1		1/16	2		1/3	37		6 3/4
State-Owned Hospitals	8	627	3 1/2				1	100	1/3	9	727	4
County-Owned Health Centers	41		2 1/2	10		1/2	6		2/5	57		3 3/8
TOTAL	151	4,444	\$63 1/2	19	414	\$6	22	544	\$7 1/2	192	5,402	\$77

*Cost shown in millions of dollars. Cost for projects in planning stages based on estimates.

quarters for the activities of county health departments. The 89 hospitals are serving or will serve local or county communities, and they have provided or will provide 4,675 new patient beds. The 37 nurses' residences have provided or will provide 1,961 new beds for nurses. Nine of the 192 projects are State-owned hospital facilities. They will provide a total of 727 new beds for patients. In all, 5,402 new patient beds have been provided or contracted for.

Of the 43 new local general hospital projects aided by the Commission, 25 have 50 beds or more. These 25 hospitals have one or more rooms equipped for the isolation of patients having infectious diseases, and of these, 18 have been further designed to permit the temporary care of psychiatric patients. Several of the 46 additions to existing hospitals already had rooms in which to care temporarily for psychiatric patients. Such facilities are needed because where not available it has often been necessary to confine mental patients in jails pending the completion of arrangements for their admission to State hospitals.

The 192 construction projects approved by the Commission during seven years to June 30, 1954, have required the encumbrance of approximately \$77 million, of which the United States Government supplied about \$27 million, the State \$15 million, and the local authorities \$35 million. The construction and equipment of hospital and health center projects has been the Commission's major activity.

The present status of Commission-sponsored construction projects and their costs may be found on the following page in a Table designated as Exhibit A.

The Legislatures of 1949 and 1951 appropriated directly to the State agencies involved the funds to cover the cost of State-owned hospital construction. These funds provided new or enlarged facilities for the care of mental, tubercular, crippled, and spastic patients as well as for the Medical Center buildings on the campus of the University of North Carolina. The Medical Center includes a 400-bed Teaching Hospital, a four-year School of Medicine, a School of Dentistry, a School of Pharmacy, a School of Nursing, a School of Public Health, a Psychiatric Hospital wing of 75 beds, and a 100-bed Tuberculosis Hospital. The Commission in 1951 did supply \$500,000 of federal funds toward the cost of the 100-bed Tuberculosis Hospital and is also making available at this time \$170,000 in federal funds toward the construction cost of a 100-bed addition to the Dobbin Infirmary, State Hospital, Raleigh.

Only fifteen counties in the state are now without hospital facilities. The majority of them are small and sparsely settled and their total population constitutes less than five per cent of the state's population. The people of these counties need hospital facilities but most of them could not independently finance the operating cost of hospitals. To avail themselves of hospital services four of the fifteen counties—Graham, Clay, Madison, and Northampton—united to form hospital districts. In some cases, the other eleven counties without facilities might obtain hospital services through the formation of districts. Eight of the fifteen counties without hospitals have health centers and another one has a health center project approved and in the planning stages.

At present, the greatest need for hospital construction in North Carolina exists in some of the large and populous counties. In several of these counties there are a number of urban communities in which the hospital facilities are inadequate in size and the buildings are obsolete and should be replaced. In a few counties there are privately owned hospitals that are not eligible for Commission aid toward replacement or additions.

The towns of Washington, Wilson, Raleigh, Elizabeth City, Wilmington, as examples, have old facilities, some of which should be modernized, or replaced and larger facilities provided. Several old hospitals barely meet the sanitary requirements of the State Health Department, or provide the degree of protection against fire required by the Building Code of the State Insurance Department. In Wake County, having a population of 137,000, and in which Raleigh is located, no new local general hospital beds have been provided in many years. The need for new and larger facilities is urgent. No new or enlarged facilities have been provided for Negro patients in Mecklenburg County in which Charlotte is located. Several of the new local general hospital projects the Commission has aided are inadequate to meet the present need for patient beds. The failure to construct hospitals of adequate size has been due usually to a shortage of funds. The owners of some of these hospitals are raising additional funds and have applied to the Commission for aid for additional construction.

There are in the state a large number of small and sparsely populated communities that are unable independently to support hospitals; yet they are in need of medical services and clinic facilities. Some hospital authorities advocate the operation of diagnostic and treatment clinics for ambulatory patients to serve such communities. Where practi-

cable, they should be established as outposts of well staffed and equipped hospitals.

The Commission, at the beginning of its construction program in 1946, made the county the hospital area throughout the State. The new hospitals have been located usually at the county seat or at the principal trading center. The construction of auxiliary hospitals in the county or clinics for out-patient services has not been included as a part of the Commission's construction program. However, Congress in 1954 authorized aid toward the construction of diagnostic and treatment clinics for ambulatory patients.

Under the original Hill-Burton program and the new 1954 additions, the following categories of medical and hospital facilities are now eligible for Commission aid toward the cost of construction and equipment:

- (1) Local general hospitals.
- (2) Nurses' residences to serve local general hospitals.
- (3) Health centers to house county health departments.
- (4) Diagnostic and treatment centers for the diagnosis or treatment, or both, of ambulatory patients.
- (5) Chronic diseases hospitals.
- (6) Nursing homes under the supervision of physicians to care for patients who require medical and/or nursing care. The term excludes institutions the primary purpose of which is to provide domiciliary care.
- (7) Rehabilitation centers for the rehabilitation of disabled persons.

While applications for financial aid toward the cost of constructing and equipping the seven categories of facilities may now be submitted to the Commission, applications for those facilities listed in items (4) through (7) cannot be processed immediately pending the completion of a survey of the needs of facilities in these fields. Tuberculosis and mental hospital facilities are eligible for aid under the Hill-Burton program; however, the needs for these facilities under federal standards have been satisfied.

The Federal share of the cost of constructing and equipping eligible facilities has been set at 50 per cent. The local share of the cost which has been based in the past on a sliding scale will depend in the future upon the availability of state funds.

In review, it may be said that, although gratifying progress has been made in North Carolina in meeting the need for medical and hospital facilities, a large part of the need has not been met. Accordingly, a substantial need for more medical facilities and better hospitals will continue for many years.

Put A.M.E.F. Over the Top

Now is the time for all good doctors to come to the aid of their medical schools. Give generously to help the American Medical Education Foundation reach its 1955 goal of two million dollars for our nation's medical schools. Final count on the 1954 A.M.E.F. fund-raising drive totaled \$1,182,627.08 from 22,996 individual contributors. This represents contributions from 11.22 per cent of the medical profession as compared with only 8.89 per cent in 1953.

This year the Foundation plans to step up its national direct mail campaign as well as to encourage more personal solicitations from state and county A.M.E.F. committees.

BULLETIN BOARD

COMING MEETINGS

University of North Carolina School of Medicine, Postgraduate Medical Courses:

Statesville—February 22, March 1, 15, 22, 29, April 5

Albemarle—February 23, March 2, 16, 23, 30, April 6

Shelby—April 6, 20, 27, May 11, 18, 25

Chapel Hill—Third Annual Postgraduate Course in General Medicine and Surgery, March 8, 9, 10

Chapel Hill—Postgraduate Course in Diagnostic Methods and Aids, February 16, 23, March 2, 9, 16, 23, 30, April 6

Chapel Hill—Clinical Seminars in Ophthalmology, the last Saturday in each month.

Fourth Annual Cancer Symposium Sponsored by the Forsyth County Medical Society—Robert E. Lee Hotel, March 10.

North Carolina Rural Health Conference: Eastern Conference—East Carolina Teachers College, Greenville, March 17; Western Conference—George Vanderbilt Hotel, Asheville, March 24.

Greensboro Academy of Medicine, Eighth Annual Medical Symposium—Jefferson Country Club, Greensboro, March 24.

Southeastern Allergy Association—Orlando, Florida, March 25-26.

American College of Surgeons, Sectional Meeting—Nashville, Tennessee, April 4-6.

Twenty-eighth Annual Spring Congress of Ophthalmology and Otolaryngology—Gill Memorial Eye, Ear, Nose, and Throat Hospital, Roanoke, Virginia, April 4-9.

American College of Chest Physicians, Council on Postgraduate Medical Education, and the Laennec Society of Philadelphia, Postgraduate Course on Diseases of the Chest—Bellevue Stratford Hotel, Philadelphia, March 7-11.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

The Inpatient Service of the Department of Psychiatry moved into two 18-bed wards in the new psychiatric wing of the North Carolina Memorial Hospital on Monday, January 10. Facilities are available for diagnosis and therapy of all forms of emotional disorders in adults. Plans are for activation of two additional wards later in the year as staff permits.

* * *

The Psychiatric Outpatient Center of the North Carolina Memorial Hospital moved into the new South Wing on December 30, 1954. The Clinic occupies an entire floor, and the lay-out comfortably accommodates the various functions. The furnishings and decorations were designed to be functionally satisfactory as well as pleasantly comfortable for the patients.

The Psychiatric Outpatient Center offers diagnostic, treatment, and consultation services for children and adults. It is staffed by psychiatrists, psychologists, and psychiatric social workers. One psychiatrist devotes himself to working with children, and a child psychiatric section is being organized. Primarily established to serve in-state patients, the Clinic serves out-of-state patients when suitable arrangements can be made. Clinic fees are adjusted to the patient's income according to a sliding scale.

Patients may be referred by their physician or a social agency. Appointments should be obtained from the director.

* * *

Dr. John Caffey was guest lecturer at the Medical School on January 18 and 19, when he spoke at both afternoon and evening meetings. Dr. Caffey is professor of radiology in the College of Physicians and Surgeons, Columbia University, and radiologist and attending pediatrician to the Babies Hospital and Vanderbilt Clinic, New York.

* * *

Dr. Edward C. Curnen, professor and head of the Department of Pediatrics, attended a conference on "Biology of Poliomyelitis" in New York City on January 20 and 21. This conference was sponsored by the New York Academy of Sciences.

* * *

Dr. Robert A. Ross, professor and head of the Department of Obstetrics and Gynecology, and Dr. Charles E. Flowers, Jr., associate professor of obstetrics and gynecology, participated in the program of combined meeting of American Congress of Obstetrics and Gynecology and American Association of Obstetricians and Gynecologists in Chicago. The meeting was held December 13-18.

* * *

Dr. W. P. Richardson, assistant dean for Continuation Education, announced the corrected schedule for postgraduate medical courses in 1955, which appears in this issue under "Coming Meetings."

* * *

The third annual three-day postgraduate course in general medicine and surgery has been announced by the Office of Continuation Education for Tuesday, Wednesday and Thursday, March 8, 9, 10, at North Carolina Memorial Hospital. It is planned that one full day will be devoted to the comprehensive coverage of one topic. One day will be devoted to gastrointestinal diseases; another day to gynecologic problems, including psychiatric aspects of the menopause, sterility, and dysmenorrhea; and the third day to pulmonary diseases.

* * *

The following weekly postgraduate course for the general practitioner on Diagnostic Methods and Aids sponsored by the U.N.C. School of Medicine will meet at North Carolina Memorial Hospital for one and one-half hours on Wednesday afternoons as follows:

February 16 and February 23, 2:20 p.m.

The X-ray Interpretation of the Chest—Normal and Abnormal—Charles A. Bream, M.D., Associate Professor of Radiology, and William H. Sprunt, III, M.D., Assistant Professor of Radiology.

March 2, 2:20 p.m.

Methods of Evaluating the Blood — Jeffress G. Palmer, M.D., Assistant Professor of Medicine.

March 9, 2:20 p.m.

Newer Concepts of Treatment and Diagnosis in Gynecology—Eleanor Easley, M.D., Clinical Instructor in Obstetrics and Gynecology.

March 16, 2:20 p.m.

Diagnosis Tests in Infectious Diseases—William J. Cromartie, M.D., Associate Professor of Bacteriology and Medicine; George P. Manire, Ph.D., Associate Professor of Bacteriology; William R. Stranghn, Jr., M.S., Assistant Professor of Bacteriology; Annie V. Scott, M.D., Visiting Professor, Department of Pediatrics.

March 23, 2:20 p.m.

Biopsy in the Office of the General Practitioner—Margaret Swanton, M.D., Assistant Professor of Pathology, and Warner L. Wells, M.D., Assistant Professor of Surgery.

March 30, 2:20 p.m.

Diagnosis of Thyroid Function—Charles H. Burnett, M.D., Professor and Head of Department of Medicine.

April 6, 2:20 p.m.

Round table discussion—a panel of faculty members will answer questions of the audience. This program is designed especially to provide an opportunity for physicians to ask questions in the broad area of diagnostic methods and tests which have not been covered previously. The panel will cover the major diagnostic areas.

Participants are cordially invited to attend the Combined Staff Conference which meets in the Clinic Auditorium at 4:00 p.m., immediately following these sessions.

Meetings will be held in the Clinic Auditorium, 4th Floor Clinic Building.

* * *

Ophthalmologists of the state have been invited to attend a series of clinical seminars in ophthalmology to be held at 10:00 a.m. on the last Saturday of each month. The series got under way Saturday, January 29. The sessions are co-sponsored by the Division of Ophthalmology of the Department of Surgery and the Office of Continuation Education. The sessions are planned to be informal meetings. Unusual or otherwise interesting cases will be presented, with ample time for personal examination of the patient by each of the physicians present. The meetings will adjourn between 12:00 and 1:00 p.m.

* * *

The National Foundation for Infantile Paralysis has made a three-year grant of \$97,963 to the University of North Carolina School of Medicine for the development of a comprehensive program of teaching the concept and basic techniques of total patient care and rehabilitation to undergraduate and graduate medical students and associate medical personnel. Under the grant the University will develop a teaching and service program in total rehabilitation, and will offer educational and consultation services to community hospitals throughout North Carolina, strengthening rehabilitation services available to handicapped residents of the whole state.

The grant will provide for employment of a medical director, an occupational therapist, a supervising nurse, and a medical social worker in the rehabilitation program. The University of North Carolina is one of 12 United States medical schools to which the National Foundation has made such grants since 1953.

* * *

Mr. S. B. Joyner, a senior medical student at University of North Carolina School of Medicine, presented a paper at a meeting of the Southern Society for Clinical Research January 29 at New Orleans. The paper entitled "An Analysis of the Chemical Events and Their Interrelationships with Alterations in the ECG during Respiratory Acidosis and Alkalosis" presents the results of research studies made by Mr. Joyner, together with Drs. David A. Davis, D. T. Young, Ernest Craige and L. G. Welt.

* * *

A paper entitled "A Study of the Osmometric Behavior of the Human Red Blood Cell" was presented at the January 29 meeting of the Southern Section of the American Federation for Clinical Research in New Orleans. This investigation was carried out by Drs. C. C. Fordham, III, T. F. Williams, W. Hollander, Jr., and L. G. Welt. The paper was presented by Dr. Fordham.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

The Association of University Anesthetists met at Duke University, January 22-23, with some 50 of the nation's leaders in the field of anesthesiology in attendance. Participants in the scientific program included the following Duke professors: Dr. Will C. Sealy, Dr. Glenn Young, Dr. Byron Bloor, Dr. John B. Hickam, and Dr. Joseph E. Markee.

Dr. Emanuel M. Papper of Columbia is president of the Association, and Dr. Faulconer is president-elect. Other officers include Dr. Austin Lamont, University of Pennsylvania, secretary; Dr. Eckenhoff, treasurer; and three councilmen-at-large: Dr. Van Bergen; Dr. Stuart Cullen, Iowa State University; and Dr. C. Ronald Stephen, of Duke.

Dr. Stephen, chief of Duke's Division of Anesthesiology, was host to the meeting.

* * *

The Raymond C. Henyan Fellowship at Duke University School of Medicine has just been renewed for 1955, it was learned here recently. The Henyan Fellowship is an important part of a large research project in neurosurgery at Duke, under the direction of Dr. Barnes Woodhall.

* * *

"Our Aging Population" was the subject of Duke University's Medical Town Hall held on January 30.

Special guest on the program was Miss Hattie S. Parrott of Raleigh, a well known figure in North Carolina education for more than 50 years. Other participants were Dr. Ewald Busse, Dr. Robert Barnes, and Miss Frances Jeffers, of the Duke Department of Psychiatry; Dr. Weston LaBarre, Duke anthropologist; and Dr. E. E. Menefec, chest specialist at Duke Hospital.

* * *

Miss Ann M. Jacobansky, former director of undergraduate nursing instruction, has been named dean of the Duke University School of Nursing, Dean W. C. Davison of the Duke Medical School announced recently.

Miss Jacobansky succeeds Dean Florence K. Wilson, who retired last November after serving eight years as dean.

SEMINAR IN INDUSTRIAL HEALTH

Physicians and industrialists from North Carolina and neighboring states gathered at the University of North Carolina on January 13-16 for a seminar in industrial health.

The seminar was sponsored jointly by the University School of Medicine, the Occupational Health Committee of the State Medical Society, and the Liberty Mutual Insurance Company. Financial assistance to the seminar was also given by the North Carolina Medical Foundation.

University faculty members who served on the staff are Dr. W. P. Richardson, Dr. A. T. Miller, Dr. R. Beverly Raney, Dr. A. Price Heusner, Dr. Deborah C. Leary, Dr. Kerr L. White, and Dr. Hubert C. Patterson, all of the Medical School; and Professor M. S. Breckenridge, School of Law.

Charles Warren, director of Vocation Rehabilitation, North Carolina Department of Public Instruction, lectured on rehabilitation in industry at the Friday session, and a panel discussion on medical and health problems in industry closed the meeting.

GREENSBORO ACADEMY OF MEDICINE

The Greensboro Academy of Medicine will hold its eighth annual medical symposium on Thursday, March 24, at the Jefferson Country Club. Registration will begin at 9:30 a.m.; lunch will be at 12:30 p.m. and dinner at 6:30 p.m.

EDGECOMBE-NASH MEDICAL SOCIETY

The regular monthly meeting of the Edgecombe-Nash Medical Society was held in Rocky Mount on Wednesday, January 12. Dr. J. H. Frierson, Jr., was in charge of the program.

New officers of the Society are Drs. H. O. Pearson, president; John Chambliss, first vice president; H. S. Hussey, Jr., second vice president; J. C. Brantley, Jr., secretary-treasurer; and W. K. McDowell, editor of the *Bulletin*.

GILL REFRESHER COURSE IN OPHTHALMOLOGY

The Gill refresher course in ophthalmology and otolaryngology is scheduled to be held in Roanoke, Virginia, April 4-9. This will constitute the twenty-eighth annual Spring Congress in Ophthalmology and Otolaryngology conducted at the Gill Memorial Eye, Ear and Throat Hospital since it was organized in March, 1927. Those interested in this postgraduate program may write to Dr. H. L. Bell, the Gill Memorial Eye, Ear, Nose and Throat Hospital, Roanoke, Virginia.

SOUTHEASTERN ALLERGY ASSOCIATION

The Southeastern Allergy Association will meet in Orlando, Florida, on March 25-26. A program based on the theme, "Allergy and Its Relation to Industrial Medicine," has been arranged. Physicians having papers they wish to present should write Dr. Ben Miller, 1433 Gregg Street, Columbia, South Carolina, without delay.

AMERICAN HEARING SOCIETY

The American Hearing Society announces March 1 as opening date for competition for the 1955 Kenfield Memorial Scholarship, an award made annually to a prospective teacher of lipreading. Application blanks may be obtained by writing to the society's national headquarters, 817-14 Street, N.W., Washington 5, D. C.

Deadline for returning completed applications is May 1. They are to be mailed to Mrs. Dorothy J. Cornett, 4310 S.W. 14th St., Coral Gables 34, Florida. Mrs. Cornett is chairman of the American Hearing Society's Teachers Committee.

INTERNATIONAL COLLEGE OF SURGEONS

The International College of Surgeons offers to one young surgeon a one-year, \$3,000 non-travel scholarship abroad in a teaching center in Europe or South America. One may address Scholarship Committee ICS, 1516 Lake Shore Drive, Chicago 10, Illinois.

MISSISSIPPI VALLEY MEDICAL SOCIETY

The following have been elected as the 1955 Mississippi Valley Medical Society officers: president-elect, Dr. Frank R. Peterson, Cedar Rapids, Iowa, formerly professor and head of the Department of Surgery, State University of Iowa; first vice president, Joseph C. Edwards, St. Louis, instructor in clinical medicine, Washington University; second vice president, Dr. Arkell M. Vaughn, Chicago, pro-

fessor of clinical surgery, Loyola University; third vice president, Dr. Rubin H. Flocks, Iowa City, professor of urology, State University of Iowa; secretary-treasurer, Dr. Harold Swanberg, Quincy, Illinois, (elected for twenty-first consecutive term); assistant secretary-treasurer, Dr. Jacob E. Reisch, Springfield, Illinois, accounting officer, Dr. Thomas F. Harmon, Springfield, Illinois, Dr. Arthur S. Bristol, Princeton, Missouri, past-president, Missouri State Medical Association, is the 1955 president, and Dr. Joseph C. Edwards, St. Louis, is the chairman of the St. Louis Arrangement Committee.

The twentieth annual meeting will be held at the Hotel Jefferson, St. Louis, September 28, 29, 30. The American Medical Writers' Association will also meet at the same hotel, September 30, October 1.

* * *

The January number of the Mississippi Valley Medical Journal (Quincy, Illinois) is the annual American Medical Writers' Association number. It is principally devoted to papers read at the 1954 annual meeting of the Writers' Association in Chicago last September. There is a symposium on Collegiate Education in Medical Journalism and Writing, with papers by I. W. Cole, Earl English, Raymond C. Pogge, Benjamin B. Wells, Charles R. Jordan, and Harold Swanberg; also a symposium on Medical Writing, with papers by I. Phillips Frohman, Sidney W. Scorse, Waltman Walters, Alexander R. Gutman, Harry A. Oberhelman, and Russell L. Cecil. These papers, like those of recent years, will be available in a reprint, "1954 Symposia on Medical Writing," and may be secured for 25¢ postpaid from the Headquarters of the American Medical Writers' Association, 209-224 W.C.U. Bldg., Quincy, Illinois.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

* * *

A.M.A. to Issue New Placement Aids

Tips for doctors seeking new locations to practice and communities looking for a doctor may be found in two new physicians placement service booklets to be issued late in the spring by A.M.A.'s Council on Medical Service. The first, "Physicians Placement Service—1955" deals with the history and present operations of the A.M.A.'s placement service, giving special attention to the activities of the services maintained by, or in cooperation with, state medical societies.

The second booklet answers the question from civic leaders, "What have other communities done to attract physicians?" Brief accounts of modern medical facilities which have been made available to physicians by a number of communities, along with floor plans and photographs, are presented. This pamphlet complements the 1953 booklet, "A Doctor for your Community."

* * *

Doctors, Educators to Discuss School Health Problems

Health of the school child will be the chief topic of conversation at the annual meeting of the Joint Committee on Health Problems in Education of the A.M.A. and the National Education Association March 14-16 at A.M.A. headquarters, Chicago. Each year the Joint Committee considers important problems suggested by physicians, educators, and others interested in the school health field.

This year the group will discuss for future publication in pamphlet form such subjects as: (1) Rest and sleep problems of growing children; (2) health status of school personnel; and (3) nutrition problems.

ARMED FORCES INSTITUTE OF PATHOLOGY

The feasibility of consultation by pathologists through the medium of color television was explored in a three-day symposium sponsored by the Armed Forces Institute of Pathology at its new atomic attack resistant building in northwest Washington.

The meeting, which began Monday, January 17, was climaxed by a dramatic color television presentation that brought pathologists from different cities together for consultation.

VETERANS ADMINISTRATION

Veterans Administration has announced the appointment of Dr. Samuel J. Muirhead, chief of professional services at the Lebanon, Pennsylvania, VA hospital, as manager of the 973-bed neuropsychiatric hospital at Salisbury, succeeding Dr. Louis A. Verdel, who retired in December, 1954.

Dr. Muirhead was born in Brazil and received his medical degree from Baylor University College of Medicine. He interned at the Shreveport Charity Hospital in Shreveport, Louisiana. He joined VA at its Waco, Texas, hospital in 1941, and since that time has served at VA hospitals in Los Angeles, California; Sheridan, Wyoming; North Little Rock, Arkansas, and Lebanon, Pennsylvania.

Dr. Muirhead has been chief of professional services of the Lebanon hospital since June, 1952. He is a World War II veteran and a diplomate of the American Board of Psychiatry and Neurology.

* * *

Persons entering the armed forces for the first time on and after today (February 1, 1955) will be peacetime veterans when they leave service and, as such, will be entitled only to peacetime benefits, Veterans Administration said recently.

Peacetime veterans, under present laws, will not be eligible for any of the benefits provided by the Korean GI Bill, nor for any wartime service benefits payable to veterans of the Korean conflict period.

Peacetime veterans may be entitled, under certain conditions, to medical and domiciliary care, disability compensation, aid for the blinded, "wheel chair" homes, servicemen's indemnity, guaranty of commercial life insurance premiums, burial expenses, burial flag, guardianship service and appeals. Their dependents may be entitled to death compensation where the veterans die of service-connected causes.

Classified Advertisements

OAK FOREST LODGE— A CONVALESCENT HOME

For Male, Female, ambulatory or bed-patients. Avents Ferry Road, Raleigh, North Carolina. Mrs. Freda Grow, Operator. Phone 3-9678.

FOR SALE: General Practice; New 50 bed hospital, will introduce, leaving to specialize. George W. Fisher, Jr., M.D., Box 505, Elizabethtown, North Carolina.

FOR SALE: Emerson vascular rocking bed for treatment of circulatory disorders, practically new. Regular price \$900, will sell for \$500. May be seen at Carolina Surgical Supply Company (Raleigh Store), MARY ELIZABETH HOSPITAL, RALEIGH, N. C.

The Month in Washington

With the eighty-fourth Congress well into its first session, all indications point to an active year in medical legislation. Many of the bills will founder somewhere along the way, but as of now an imposing number are lined up awaiting consideration in Senate and House.

Confirmation that medical problems rank high in the administration's work schedule for Congress came early in January in President Eisenhower's State of the Union Message. This is the address, delivered in person before a joint meeting of Senate and House, in which the President annually outlines in general terms the condition of the country and the new legislation he believes should be enacted.

This message highlighted the President's objectives, but did not tell in specific terms how he expected to reach them. The details came later, in five additional messages to Congress, including one on health on January 24. The President wants Congress to take action on the following health and medical items:

1. A federal health reinsurance service. This idea was rejected by the House last year, but neither Mrs. Hobby nor Mr. Eisenhower has given up hope for it.

2. A plan to insure better and more uniform medical care for public assistance recipients through larger U.S. appropriations and more administrative controls.

3. Federal assistance in construction of health facilities and in providing more trained health personnel (other than physicians).

4. A new federal program to combat mental illness and return more mental patients to useful lives outside institutions.

5. An improved federal program for aiding crippled children and for maternal and child health.

6. Strengthening of the pure food and drug laws to give greater consumer protection.

7. More attention to "the increasingly serious pollution of our rivers and streams and the growing problem of air pollution."

8. An expanded program for the medical care of military dependents.

9. A voluntary health insurance program for federal civilian employees with U.S. contributions and payroll deductions authorized for the employees.

So much for what the Republican President hopes to get through Congress. It is too early to say how much of this program will have the support of the Congress, now under Democratic control. It is clear, however, that many leading Democrats want to enact some legislation the President didn't include in his program.

Federal aid to medical education is prominent in the plans of many of the Democrats, and some of the Republicans. The bills cover a wide range, some restricted to construction grants but others offering help in meeting operating expenses and incentives to increase the number of students. Other bills offer federal grants to voluntary health plans to subsidize coverage of the indigent, the "medically indigent," the unemployed, and the aged. Because the administration has declared itself opposed to subsidies, it is unlikely that any measures of this type will win the support of Mrs. Hobby's department and the White House.

Members on both sides of the aisle also are proposing greater emphasis on research, seeking the causes and cures of such diseases as cancer, heart disease, mental illness, and arthritis. Some of these bills fit in with the Eisenhower program and philosophy, and are likely to have White House support at the hearings.

This tendency to stimulate more basic medical research, both at the federal level and through state grants, may be an important factor when Congress gets around to passing the appropriation bills for the various Institutes of Health, the research arm of U. S. Public Health Service.

Several years ago a Democratic Congress took a serious interest in a bill for federal aid to local public health departments. Some of the influential Democrats have revived this idea, and are working for its passage this session. As expected, the old Truman-Ewing plan for national compulsory health insurance again is before Congress. The first one to introduce a bill along these lines was Representative John D. Dingell, a sponsor of the original plan. Later others joined with him in backing the idea, but up to now the open support for it is not extensive on Capitol Hill.

NORTH CAROLINA

Medical Journal



Vol 16 No. 3
March, 1955

IN THIS ISSUE:

PROGRAM OF THE ANNUAL MEETING

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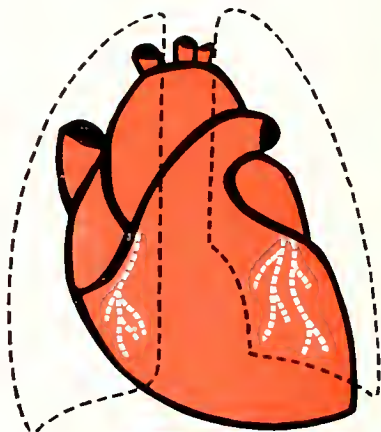
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NUMBER 3

NONPENETRATING ABDOMINAL TRAUMA

ALEXANDER WEBB, JR., M.D.

RALEIGH

In recent years there has been a tendency to admit all patients with trauma to the orthopedic service. Too often the general surgeon has been called in too late to contend with associated injuries not related to the fracture. For this reason I would like to present a group of abdominal injuries unassociated with penetration, but requiring diagnostic acumen if the mortality of such conditions is to be lowered. It is a simple matter for a penetrating injury with entrance or emergence through the abdominal cavity to make the house staff alert to the necessity for abdominal exploration. However, nonpenetrating abdominal trauma is treacherous to diagnose and requires frequent and repeated examinations in order that emergency or definitive surgery may be carried out⁽¹⁾.

A sudden blow to the celiac plexus or contusion to the abdominal wall may be the cause of severe shock, but this usually clears in a matter of moments after anti-shock therapy has been instituted⁽²⁾. Retroperitoneal injury, whether it results in rupture of the kidney, retroperitoneal hemorrhage, or compression fracture of the lumbar or dorsal spine, is a different matter. In these conditions shock is more prolonged and peritonism is frequently present, with a markedly increased white cell count. Shock with abdominal rigidity in all quadrants may make one wonder whether spinal fracture is associated with intra-abdominal injury—either bleeding or rupture of a hollow viscus.

The following is the case history of such a confusing situation.

Spinal Fracture

A 26 year old woman who had been in-

jured in an automobile accident was brought to the emergency room of Rex Hospital in Raleigh. Morphine and hyoscine were given, and she was seen by me two hours after admission. The patient was irrational, in deep shock, and the abdomen was rigid. The white cell count was 42,000, and there were several areas of tenderness along the spine. The abdomen of this patient was repeatedly examined over a period of three hours, but the blood pressure continued to fall after temporarily rising following the administration of 1,000 cc. of plasma and 500 cc. of whole blood. We were certain of spinal injury, and suspected an intra-abdominal injury.

Four hours later the patient was taken to the operating room and was examined again just before laparotomy was to be performed. She had just undergone a chill due to transfusion reaction, and it was found that the abdomen had become soft. The patient was accordingly returned to the ward without operation.

Figure 1 represents the fractures of the lumbar vertebra with retroperitoneal hemorrhage, which would give the picture of peritonism.

This case demonstrates the necessity of repeated examinations of the abdomen whether there be a fracture or not. Certainly x-ray studies should be made when fracture of the spine is considered or suspected; but these should be done on a portable basis. The tugging and pulling of patients on the hard x-ray table is enough to make a normal person go into shock, much less a person with a spinal or abdominal injury.

The differential diagnosis of intra-abdominal injuries without evidence of penetration involves three very important features that should be carried out:

1. *Repeated physical examination.* The

From the Surgical Services of Rex and St. Agnes Hospitals, Raleigh, North Carolina.

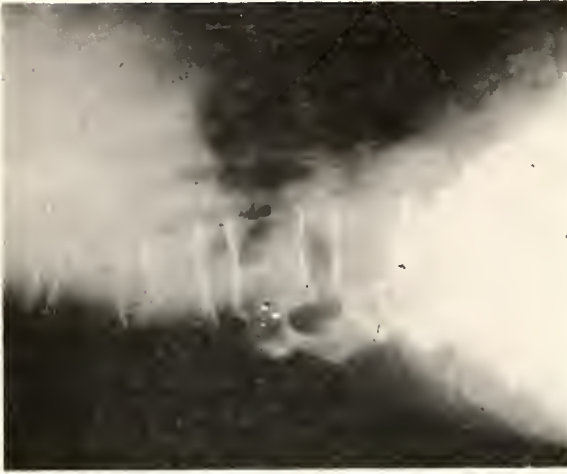


Fig. 1. Film showing the lumbar spinal fracture with concomitant retroperitoneal hemorrhage.



Fig. 2. Roentgenogram showing the upper abdomen, with the spleen well outlined.

doughy abdomen, the rigid abdomen, rebound tenderness, and persistent referred rebound tenderness to any one of the four quadrants are of the greatest significance, and should never be underestimated despite the many laboratory procedures that are at our hands.

2. *Repeated blood counts.* The use of the hematocrit and other instrumentations is excellent, but the mere fact that an increase in white cell count with a shift to the left or a decrease in the red cell and hemoglobin counts can tell us whether peritonitis or hemorrhage is taking place.

3. *Radiologic examination of the abdomen* should always be done. If a spinal fracture is suspected, this should be ruled out before getting an upright abdominal film which will show evidence of gas beneath the diaphragm. Wangenstein⁽³⁾ has demonstrated that as little as 4 cc. of gas will show its presence. Not to be forgotten is that any time a scout film of the abdomen is taken, it is always best to make a three-way x-ray examination. This means a flat plate, an upright abdominal plate with the diaphragm included, and a lateral decubitus view.

Abdominal Injuries

Spleen

Figure 2 demonstrates the roentgenogram of a 16 year old girl who had fallen from a height of 4 feet onto a chair four days previously. There had been abdominal pain without nausea or vomiting, and the pain had persisted. The red and white cell counts on the date of this x-ray were within nor-



Fig. 3. Roentgenogram of the same patient showing evidence of fluid within the abdominal cavity. The spleen cannot be seen, while the colon seems to be pushed downward.

mal limits, but the pain continued for seven days after the initial fall, when she suddenly cried out and collapsed. She was admitted to the hospital and given stimulants, but her blood pressure was 60 systolic, 0 diastolic. The red cell count was 3,820,000, hemoglobin 11 Gm. (71 per cent), and the white cell count 20,100, with 75 segmented cells and 7



Fig. 4. The artist's conception of the spleen, showing the old hematoma, followed by a rent through the capsule with massive hemorrhage.

stab forms. She was listless, complaining of pain in the left upper quadrant and in the left supraclavicular region. Her blood pressure gradually returned to 100 systolic, 60 diastolic after the administration of 1,000 cc. of 5 per cent glucose in normal saline.

Figure 3 shows the x-ray findings on admission. A left upper rectus incision was made and later converted to a T when the original diagnosis of ruptured spleen was confirmed by exploration. About 1,500 cc. of bright red and old blood was found in the abdominal cavity. Figure 4 presents a picture of the spleen, showing an old hematoma which had occurred seven days previously, with a rent through the capsule made just before admission to the hospital.

Splenectomy was carried out, and the patient was given a transfusion to rebuild the blood volume. She was discharged on the fifth postoperative day in excellent condition.

This case demonstrates the dangers of a ruptured spleen, which may be delayed up to six weeks after the injury or which may occur immediately, with concomitant massive hemorrhage necessitating an immediate

splenectomy and replacement of blood volume.

Liver

The liver may be merely contused, but a severe blow without any fracture may cause a complete rupture, with massive hemorrhage.

Figure 5 demonstrates an abdominal roentgenogram of a young man who was brought into the hospital after being in an automobile accident while driving drunk. He was hard to control. The following day after receiving sedation, the patient began to vomit, and Wagensteen suction was instituted. There was a gradual drop in the red cell, and hemoglobin counts. The patient's abdomen became more distended, and 48 hours later, because there was no improvement in the man's condition, exploratory laparotomy was carried out. At operation a large rent in the left lobe of the liver was found on the superior surface and retroperitoneal hemorrhage on right. Here the fractured ribs were on the left. The old and new blood was evacuated from the abdominal cavity and oxycell gauze was packed tightly in the tear. The postoperative course was uneventful.

The patient's alcoholic condition and the presence of fracture lulled us into a sense of false security, so that diagnosis of an intra-abdominal hemorrhage from the liver was not made until 48 hours after admission. It was felt at first that retroperitoneal hemorrhage alone was the cause. This demonstrates the blunt force that may cause the



Fig. 5. X-ray film shows marked paralytic ileus with distension of the gastric agents, but there is evidence of fluid between the coils of the intestines.

rupture of a solid organ with concomitant hemorrhage.

Kidney

The majority of damaged kidneys can be treated expectantly. Our urologist states that he has never had to operate on one.

Hollow Viscus

Intestine

In this group can be included any injury which causes rupture of any portion of the gastrointestinal tract. The literature reveals that such injuries may be caused by a direct blow or crush, tearing from the root by excessive intra-abdominal pressure; but more difficult to diagnosis is rupture in the jejunum or ileum. Apparently a segment of small or large bowel distended with gas may be contracting at the time of a diffuse blow, causing that contracting portion to split or "blow out." Of extreme interest is the fact that these patients so often have an associated hernia in the inguinal region⁽⁴⁾.

A Negro man was running with a stick in his hand to catch a chicken when he tripped and fell on the stick. There was an associated left inguinal hernia, but there was marked spasm and exquisite abdominal pain in the both left quadrants, more marked at the umbilicus. There was no nausea or vomiting. The white cell count at admission was 14,000, with 80 segmented cells and 2 stab forms. One hour later the abdominal pain was unchanged, rigidity with rebound tenderness and referred rebound tenderness were pointing to the left of the umbilicus, and the white count had risen to 32,000, with 90 segmented cells and 5 stab forms.

Figure 6 presents the artist's conception of the rent found in the terminal ileum. This portion of the ileum could not be placed in the sac of the left inguinal hernia, and there was no evidence that this area had been affected except by the contusion to the abdominal wall.

This case warns us that nausea and vomiting are late factors in intra-abdominal injuries, especially of a hollow viscus; further, that surrounding reaction may close off the "blow out," with little gas to rise to the subdiaphragmatic region. Exploration was carried out on the basis of persistent pain, associated with marked board-like rigidity and referred rebound tenderness to the left of the umbilicus. Here again repeated abdominal examinations along with the confirmation of the blood count indicated



Fig. 6. The artist's conception of a rent within the terminal ileum.

the need for abdominal exploration.

Bladder

Rupture of the gallbladder, though extremely rare, has been recorded. Rupture of the urinary bladder is not uncommon, but is usually associated with existing fractures of the pelvis as seen in automobile accidents and other violent blows that now occur almost every day. Often one wonders whether speed of the automobile, linked with the ignorance of the driver, is evidence of an improved or a retrogressive civilization.

All patients with abdominal pain or rigidity should either be made to void or be catheterized. If x-ray is unfeasible at this time, it is an easy matter to inject a known quantity of saline or distilled water through the catheter and then withdraw it. If the amount of fluid introduced is much less than that returned, the bladder is ruptured. A cystogram done with diodrast, as shown in figure 7, shows the presence of a rupture, although this particular patient had a fractured pelvis as well.

Summary

1. Abdominal injury without penetration is not an uncommon situation. The presence of fracture of a long bone, the pelvis, or the

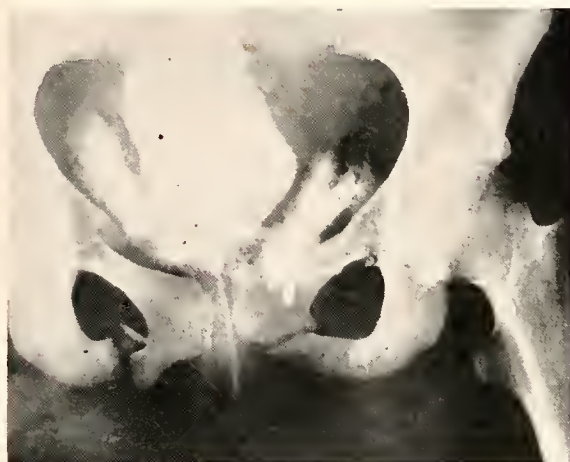


Fig. 7. Roentgen evidence of ruptured urethra and bladder.

spine does not preclude injury within the abdomen.

2. The abdomen must be examined repeatedly, and the findings confirmed by laboratory and x-ray studies.

3. Abdominal rigidity with or without shock, when there is evidence that no spinal injury has occurred, *demand*s exploration to prevent later complications.

4. Estes⁽²⁾ has aptly stated: "In doubtful cases only by frequent and repeated examination will the early evidence of a serious lesion be recognized in time to suggest operation before it is too late."

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Advances in surgery: These new fields which were opened up with the present century, gave great scope for the development of craftsmanship in surgery, skillful technique gradually replacing legerdemain. There is even a danger lest deliberation should become excessive, the surgeon losing his awareness of how time passes, so spoilt, almost, has he become as the result of the rapidly improving art of the anaesthetist and the lowered mortality following carefully planned procedures. And the very decision to operate, rather than to refrain, is also influenced by the growing sense of security. These are trends that should be watched.—Horder, L.: *Fifty Years of Medicine*, New York, Philosophical Library, 1954, p. 16.

THE PLACE OF PODALIC VERSION AND EXTRACTION IN OBSTETRICS TODAY

DEBORAH C. LEARY, M.D.

CHAPEL HILL

The operation of podalic version and extraction has a time-honored, illustrious, and bloody place in the annals of obstetrics. Known to the ancients, it fell into disuse until Ambroise Paré repopularized it in the sixteenth century⁽¹⁾. When one considers the natural history of obstructed labor, and especially of transverse presentation, the chief indication for which he advised this procedure, and realizes that without interference the maternal and fetal mortality will be close to 100 per cent, any operative procedure which can save most of the mothers, even if all the babies die, is of value. And when one realizes that as late as 1880 the maternal mortality from cesarean section was over 50 per cent⁽²⁾, while that for destructive operations ranged from 6 to 20 per cent⁽³⁾ and for version 0.1 to 5 per cent⁽⁴⁾ in cases where no actual disproportion existed, it is apparent that this operation was of great usefulness.

In 1922 Potter of Buffalo advocated the use of version and extraction as an elective procedure, to spare the patient the second stage of labor. This notion was taken up enthusiastically by a host of imitators, with disastrous results to both mothers and infants. Potter, himself a highly skilled operator, reported an initial fetal mortality of 6.73 per cent. This was approximately the same over-all fetal mortality reported by the Johns Hopkins Hospital for its first 10,000 deliveries at about this time, but with the enormous difference that Potter was dealing exclusively with white private patients, and the Johns Hopkins service was 50 per cent Negro and heavily weighted with complicated and neglected referred cases⁽⁵⁾. By 1932 Potter's reported fetal mortality had dropped to 2.3 per cent⁽⁶⁾, a respectable figure but one about which there is some doubt, since in his hospital, as in many others, damaged newborns were transferred to the pediatric service and their deaths were not always included in recorded neonatal mortality figures.

Read before the Section on Obstetrics and Gynecology, Medical Society of the State of North Carolina, Pinehurst, May 4, 1954.

Table 1

Favorable Reports of Version in Single Pregnancies

Author	Year	No.	Fetal Mortality	Maternal Deaths
Potter	1922	?	6.7	?
Potter	1932	?	2.3	?
Phaneuf	1932	372	8	4, 3 unrelated
Rosenfeld	1936	120	9	0
Jarrett and others	1951	445	3.8	0
Erving	1954	1146	5.5	1

Nevertheless we have reason to be grateful to Dr. Potter in that he perfected the version technique which is in common use today^(6,7). Among the specific points which he emphasized were that deep surgical anesthesia is always necessary, that the uterus must be well relaxed, that the cervix must be fully dilated, and that gentleness and lack of haste are essential⁽⁶⁾.

The indications for which version and extraction have been done in the past are malpresentations of the fetus such as transverse lie, face, brow; arrests of the vertex in the transverse or posterior; antepartum hemorrhage, including both placenta previa and abruptio; failed forceps and uterine inertia; prolapse of the cord; second twins⁽⁵⁾.

Mortality and Morbidity

Within recent years the popularity of this operation has declined. Any obstetric procedure, however satisfying it may be technically, must withstand the most stringent evaluation on the basis of maternal and fetal mortality and morbidity.

Table 1 presents a group of the most favorable reports available^(1,4a,5,6,8). The first four in this group are personal series, each performed by one man. Jarrett and Brandeberry's⁽⁵⁰⁾ series from Western Reserve represents an incidence of 2.12 per cent in their hospital. They report no ruptured uteri, 5 postpartum hemorrhages, and 4 cervical lacerations. Sixty-eight per cent were done for high occiput posteriors. Erving's series is from the Elizabeth Steele Magee Hospital in Pittsburgh, and represents an incidence of 2.95 per cent. His one maternal death was due to anesthesia. In 65.4 per cent of the cases the operation was done for inertia, persistent posterior, transverse arrest, or

Table 2

Unfavorable Reports of Version in Single Pregnancies

Author	Year	No.	Maternal Mortality	Fetal Mortality
Cosgrove and others	1940	177	1.1%	30.8%
Delfs and Eastman	1945	631	0.8	
Reddoch	1937	370	1.62	27.3
Assali	1947	120	1.67	38.7
Connecticut	1948	150		35.3
Keettel	1952	100	5.0	58

failure of descent. He reports only 1 ruptured uterus, but 79 cervical lacerations and 86 sulcus tears. Sixty-one uteri were packed^(4a).

Table 2 presents the other side of the record. Cosgrove⁽¹⁰⁾, reporting from the Margaret Hague in Jersey City, had 3 ruptured uteri, 15 lacerated cervixes, and 16 postpartum hemorrhages. Delfs and Eastman^(4c), reporting from Johns Hopkins primarily on cases of ruptured uterus, noted 10 in this series of 631 versions in single pregnancy, with 5 maternal deaths. Reddoch's series^(4d) represents a five-year survey of six New Orleans hospitals, and Assali's^(4e), one hospital in Cincinnati. Keettel and others^(4f) reporting from the University of Iowa, noted 4 ruptured uteri.

Since 1941 the state of Connecticut has attached a supplement to each birth and stillbirth certificate, requesting information about the delivery procedure. One hundred and fifty versions were performed in that state in 1948⁽⁹⁾, and the fetal loss for single term pregnancy delivered by version and extraction was 35.3 per cent. For single premature births the rate was even higher—60 per cent. This is shown in more detail in table 3.

It is hard to reconcile the differences in morbidity and mortality between the favorable and unfavorable groups, but it is interesting to note that both Jarrett and Erving, in spite of their highly favorable statistics, note that the incidence of version in their institutions has nevertheless dropped 40 to 50 per cent during the period under surveillance. A similar drop in incidence is reported in several of the unfavorable series cited, and in the Connecticut figures between

Table 3

Fetal Loss According to Obstetric Procedures
in Connecticut, 1948⁽⁹⁾
Rates per 1,000 total births

Procedure	Total	Single Full Term Deliveries	Single Premature Deliveries	Plural Pregnancies
No operation; low forceps	26.2	11.5	250	129
No operation	33.4	13.1	289	170
Low forceps	12.9	8.6	119	40
Mid and high forceps	23.1	21.2	114	
Cesarean section	60.7	27.9	294	136
Version and extraction	267.	353.	600	80
Breech extraction	135.	66.2	526	146

1941 and 1948. In Connecticut this drop can be correlated with a rise in the incidence of cesarean section, as is shown in table 4⁽⁹⁾.

On examining reports of various complications of labor for which version and extraction has at times been considered the indicated solution, one finds the same formidable maternal and fetal mortality. Transverse lie, for example, treated by version and extraction is reported to show an average fetal mortality of 36.4 per cent in six series. This figure is derived only from cases in which transverse presentation could not be corrected by abdominal manipulation and the fetus was alive on admission⁽¹⁰⁾. Face presentation treated in this way shows an average fetal mortality of 38.6 per cent in three series⁽¹¹⁾. The maternal mortality from version in these series was 2 per cent, and the incidence of ruptured uterus 2 per cent.

The same sort of unfavorable results can be cited for every indication for which version and extraction has been used, except delivery of the second twin. Here, in several series, no maternal mortality has been recorded, and the fetal mortality ranges from 2.2 to 12.1 per cent^(4a,b,f). Here, moreover, if the Connecticut figures are to be believed (table 3)⁽⁹⁾, version and extraction ranks second only to low forceps as a safe means of delivery (table 4). This of course has always been considered the elective version par excellence and the happy training ground for interns and residents so that they may have some idea of how to do a version if the need arises.

Comparison with other procedures

One might hypothesize that the unfavor-

Table 4

Percentage of Live Births in Relation
to Procedure⁽⁹⁾
Connecticut

	1943	1941	Per Cent Change
Cesarean section	5.8%	3.2%	+75
Mid or high forceps	3.6	4.2	-14
Breech extraction	1.6	2.1	-24
Version and extraction	0.3	0.5	-40

able series were heavily weighted with operations performed by inexperienced personnel, since four of the six reports come from large teaching hospitals. Erving notes that of his total series only 128 operations were performed by residents, but Reddoch's report is a city-wide survey of New Orleans hospitals, and the Connecticut results represent a whole state. The truth of the matter probably is that even the well qualified obstetrician today is usually an amateur when it comes to version and extraction.

Other ways of managing these complications of labor have produced, in average hands, more gratifying fetal and maternal results⁽¹²⁾. Cesarean section — either low flap, extraperitoneal, or cesarean hysterectomy—is perhaps the leading contender in the management of transverse lie^(10a,b,c,d,e), brow, unengaged heads^(3,13), intractable inertia^(2,11a,14), and placenta previa⁽¹⁵⁾, with a fetal mortality ranging from 0 to 10 per cent and a maternal mortality of 0 to 1 per cent. Expectant treatment has proved beneficial in the management of other complications, such as many face presentations^(11b,c,16), occiput posterior and transverse arrest^(2,11c,17), eventuating in spontaneous delivery in many instances, and not too difficult forceps delivery in others.

There remain, however, certain situations where version and extraction is still advocated as the procedure of choice. These are prolapse of the cord at full dilatation, transverse lie in a multiparous woman who is fully dilated, and second twins.

Complications and Precautions

It is evident from this review that certain complications must be considered likely whenever version and extraction are contemplated. The most formidable, and one which is inherent in the procedure, is rup-

ture of the uterus^(4c,18). Next come other lacerations of the birth canal. Then are those which may arise from the necessity of deep anesthesia, such as uterine atony with hemorrhage, aspiration pneumonia, and atelectasis. And finally, severe postpartum infection may supervene, since few procedures invade the uterine cavity so thoroughly.

These probabilities would suggest that whenever version is contemplated, certain precautions are advisable. Blood, in adequate quantities, should always be available before delivery is begun; the uterus should always be explored afterwards, and equipment and personnel should be present in advance in case the need to repair cervical, lower segment and sulcus tears or to perform hysterectomy should arise. And last but not least, deep surgical anesthesia should be induced before the procedure is begun.

Analysis of Cases in North Carolina

When we turn from these figures, which represent widely scattered experience, to examine our own local situation in North Carolina, we are immediately hampered by the lack of a base line upon which to determine the incidence of version and extraction and hence cannot determine mortality rates for this procedure.

In the first 1,400 deaths studied by the state Maternal Welfare Committee, 70 were associated with version and extraction, an incidence of 5 per cent of all maternal deaths. In 51 of these cases the operative procedure is considered to be directly responsible for the patient's demise. Table 5 summarizes this group of cases, giving the primary obstetric complication, the fetal loss, the presumed incidence of ruptured uterus, and my judgment, based on the assembled opinion of the various authors previously cited, as to whether the version was indicated or contraindicated.

The diagnosis of ruptured uterus in this group was made either by autopsy, exploration of the uterus, or on the basis of the patient's clinical course before death.

Transverse lie

In the group of 21 cases of transverse lie, 12 were neglected patients, with long hours of labor and ruptured membranes, impaction of the fetus, and prolapse of an arm. In general, it can be argued that patients of this type are better handled by embryotomy if the fetus is dead^(10f). One of these infants

Table 5

Deaths Associated with Version and Extraction
North Carolina 1946-1952

Condition	No. Cases	Fetal Loss	Version Indicated	Version Effected	Version Contraindicated	Ruptured Uterus
Transverse lie	21	18	10	0	11	13
Twins	4 (8)	2	1	3	0	0
Obstructed labor	12	11	3	9	9	7
Placenta previa	15	9	0	15	15	5
Severe toxemia	4	4	2	2	2	1
Eclampsia	5	3	1	4	4	1
Premature separation	7	7	1	6	6	1
Miscellaneous	2	0	1	1	1	0
	70	54	19	40	48	28

was liveborn. Ruptured uterus was found at autopsy in one of these women, at operation in another, and was suspected in 7 others. Two died of shock and exhaustion without evidence of hemorrhage, and 1 died suddenly, 12 to 18 hours *post partum*, possibly of her severe toxemia.

Of the other 9 patients, 2 who had hypertensive cardiovascular disease with superimposed toxemia died of cardiac failure. Three died of uterine atony and postpartum hemorrhage. One had a proven rupture of the uterus, underwent hysterectomy 7 days *post-partum*, and died 8 days after operation, probably of infection. Two had observed cervical lacerations and were believed to have lower segment tears, dying of hemorrhage. One more is believed to have had a ruptured uterus.

Multiple pregnancy

In none of the 4 cases of multiple pregnancy was version as such implicated as a causative factor. Two patients died of uterine atony and postpartum hemorrhage, 1 died of hepatitis 5 days *post partum*, and 1 died suddenly from unknown causes after the spontaneous delivery of the first twin. The second twin was delivered by postmortem version and extraction.

Obstructed labor

In the group with obstructed labor, 7 were thought to have ruptured uteri—3 antepartum and 4 as the result of delivery—including

ing 2 in whom version was done after forceps had failed. One was subjected to version after a six-hour labor with an occiput posterior, and one was a primipara with a face presentation. Of the other 5, 2 died of infection after failed forceps, 1 died of shock after a craniotomy, and 2 died of postpartum hemorrhage.

Placenta previa

Fifteen patients in the group had placenta previa. It should perhaps be mentioned that even those authors who are enthusiastic about version and extraction consider placenta previa a contraindication^(4a). One patient was proved to have, and 4 others were thought to have, rupture of the uterus. Ten died of atony and postpartum hemorrhage. Eight of the whole group were subjected to manual dilatation of the cervix.

Toxemia

Two patients with severe toxemia were delivered by version for obstetric reasons, 1 for failed forceps with a macerated fetus, and 1 because of cephalopelvic disproportion, resulting in a dead fetus delivered in a hospital with no craniotomy instruments. One of these patients died of shock and 1 died suddenly the day following delivery, cause uncertain. Another was delivered by *accouchement forcé* under spinal anesthesia, and died in shock, and in another version was done after a three and one half hour labor because of severe jaundice and critical condition. This patient also died in shock.

Eclampsia

Of 5 eclamptic patients, none was adequately treated medically or sedated. Labor was induced in 2, 1 with Pitocin and 1 by bag. One infant with an unengaged head was delivered after an eleven-hour second stage by version, extraction, and the application of crushing forceps to the aftercoming head. Three patients died in pulmonary edema, 1 of renal shutdown, and 1 of obstetric shock due possibly to a ruptured uterus.

Premature separation

Of 7 patients with premature separation, 5 died of hemorrhage, 1 probably of a ruptured uterus, and 1, 4 hours *post partum*, cause undetermined.

Miscellaneous

The 2 cases listed as miscellaneous in-

cluded 1 patient with rheumatic heart disease, delivered apparently by elective version of a liveborn infant, who died 33 days *post partum* of heart failure. The other patient, who was given intramuscular pituitrin because of secondary uterine inertia, suddenly became cyanotic, dyspneic, and died, presumably of amniotic fluid embolism or pituitrin shock. A postmortem version and extraction resulted in the delivery of a living infant who, however, succumbed in 24 hours. Both these deaths were considered unpreventable.

As one reviews the records of many of these patients, it is apparent that the doctor at the time was faced with an extraordinarily difficult problem which it appeared that rapid delivery might solve. Nevertheless, it is fair to say that *accouchement forcé*, manual dilatation of the cervix, and version and extraction as a means of prompt delivery, are measures which are always likely to make a bad situation worse. It is notable, furthermore, that in this whole group of patients, in spite of the well recognized hazard of version and extraction, only 19 uteri were explored *post partum*, only 17 patients received any blood transfusions and only 11 more, plasma. Of this group of 70 fatalities, the mode of delivery could be held directly responsible in 51 deaths, and of the 51 patients, 27 had ruptured uteri, 20 died of hemorrhage, and 4 died of shock.

Summary and Conclusions

In average hands, internal podalic version and extraction in single term pregnancy is a formidable procedure, and should be undertaken only when indicated. Suitable indications still remaining are prolapse of the cord at full dilatation and transverse lie at full dilatation.

Version as a means of delivering the second twin appears a relatively safe and satisfactory procedure.

Version and extraction should not be undertaken without adequate precautions such as available blood, extra personnel and equipment, so that the likely complications of cervical laceration, postpartum hemorrhage and ruptured uterus can be properly managed. Deep surgical anesthesia should always be used, and the uterus should always be carefully explored after delivery.

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Discussion

Dr. Carey Hedgpeth (Lumberton): I would start this discussion by addressing the most recent medical school graduates. I feel that the older physicians are familiar with the indications for version. I would say, however, that within the last seven to ten years, numbers of well trained men have never seen more than three or four versions. As a result, they are just a little skeptical, though they find that version is easy on a second twin.

Those who have had previous experience and have seen terminal cases admitted to the hospital, know that the indications for version are immediate and urgent. They have been trained to do versions, and have had fairly good results. In the hands of the untrained, however, the maternal mortality rate from ruptured uteri has been high. The fetal mortality rate has also been high, owing to the haste in which the procedure has to be done.

According to Drs. Bland and Montgomery, professors of obstetrics at Jefferson Medical College, in 1942 version was indicated for: (1) transverse and oblique presentations; (2) head presentations in which delivery can be more safely and successfully conducted; (3) pelvis with a moderate degree of flattening; (4) patients in whom rapid delivery is necessary for the mother or child; (5) the prolapsed arm; and (6) the second of twins.

Within the past seven years version has fallen into disrepute because of the inherent dangers to both mother and child. I feel that today analgesia and anesthesia have brought about this change. Many factors that formerly affected the delivery are now taken care of by the analgesia, thus placing the physician under less pressure, and allowing the patient more time to progress normally.

With a persistent occiput posterior, a version was a simple means of delivery. Now, with a little time, these posteriors, or the great majority of them, will rotate spontaneously and deliver rapidly.

In contrast to the indications of 1942, the indications in 1954 are only two: (1) vertex presentation in the second twin, and (2) transverse presentation.

I personally feel that cesarean section is a much safer method in the multiparous patient with a badly scarred cervix or with a history of postpartum hemorrhage. If version is indicated, however, I have no fear of it.

Versions in my practice have decreased over 90 per cent in the last 10 years. I realize that this operation is in disrepute. Still, recent graduates need training in this procedure in order to be able to take care of the few cases which fall into the categories I have mentioned.

Nutrition and Food. The nutritionist didn't have an easy task at first in his educational efforts. On the one side he was opposed by the critic who advanced that many years ago a lot of people were healthy who took no pains to balance their diet. True, they didn't take any pains, because their diet was naturally balanced; it was balanced by tradition and by experience. What the new knowledge told us was why these people were healthy in spite of taking no pains. But there were many more less fortunate folk who were not healthy but we did not know why. Children were stunted and mothers died in childbirth, or could not stand up against the strain of nursing; and now we know why. Then again, it was difficult to get the new knowledge across to the individual. To tell a 15-stone man that he was overweight but undernourished took a good deal of explaining and even the Readers' Digest didn't help in cases like this.—Horder, L.: Fifty Years of Medicine, New York, Philosophical Library, 1954, p. 23.

HISTORICAL REVIEW OF BRONCHOSCOPY AND ESOPHAGOSCOPY FOR FOREIGN BODY, EMPHASIZING SOME OF THE MORE RECENT ADVANCES IN TECHNIQUE

ALFRED A. DORENBUSCH, M.D.

CHARLOTTE

For the sake of brevity, only the highlights of the early stages of endoscopy will be discussed. An excellent bibliographical sketch of this subject can be found in Patterson's article, "History of Bronchoscopy and Esophagoscopy for Foreign Body,"⁽¹⁾ and in Jackson's textbook, *Peroral Endoscopy and Laryngeal Surgery*⁽²⁾. The historical references which follow were all taken from these two sources.

Early Milestones

Esophagoscopy for foreign body

In 1902, Killian removed a bone by esophagoscopy from the gullet of a woman 79 years of age.

Ingals, in 1903, removed a fleur-de-lis pin from the esophagus of a 2½ year old girl under chloroform anesthesia.

Collidge, in 1905, removed an open safety pin from the esophagus of a woman aged 20 years. Under ether anesthesia, he passed a Killian esophagoscope through a Kirstein autoscope, and, with Mosher's safety-pin closer, closed the pin and removed it.

Jackson, in 1905, reported 2 cases of foreign bodies removed from the esophagus by esophagoscopy. In 1906, he reported a case of a foreign body removed from the stomach by gastroscopy.

Direct laryngoscopy for foreign body

Jackson, in 1901, removed a bay leaf from the orifice of the larynx with a Kirstein autoscope. This was the first case of a foreign body removed from the larynx.

Killian, in 1902, removed a tightly fixed collar stud from the larynx.

Tracheoscopy and bronchoscopy

Killian, in 1897, removed a bone from the right bronchus through the natural passages, using a direct tracheoscope. Killian,

therefore, is credited with being the "father of bronchoscopy."

In 1904, Ingals improved the instrument used by Killian by introducing a light carrier. He further modified the Killian instrument by changing the single openings in the distal end. Multiple perforations were substituted.

Einhorn, in 1902, devised an esophagoscope with a light carrier and auxiliary tube.

Chevalier Jackson, in 1904, added the light carrier and auxiliary drainage tube feature of the Einhorn instrument to the Killian bronchoscope as modified by Ingals. Thus he developed the bronchoscope as we know it today.

In 1905, Jackson published investigations as to the use of a magnet for the removal of magnetic foreign bodies.

Jackson deserves the major credit for making the bronchoscope applicable to the diagnosis and treatment of pulmonary diseases. He not only perfected the technique, but trained men to do efficient diagnostic and therapeutic bronchoscopies.

Jackson's co-workers—Patterson, Tucker, Clerf, Lukens, and Moore—added many contributions to bronchoscopy.

Recent Advances

1. Use of the Alnico Magnet in Peroral Endoscopy

Credit for the first practical use of a permanent Alnico magnet in the extraction of a metallic foreign body goes to Silber, Kaplan, and Epstein⁽³⁾. Equen⁽⁴⁾ reported further successful use of the Alnico magnet in the extraction of ferromagnetic foreign bodies. To my knowledge, the first successful attempt to remove a magnetic foreign body from the jejunum perorally was accomplished by me in 1951.

*Case 1**

A 26 month old white boy was referred on November 7, 1951, having swallowed a nail four days previously. The nail was apparently impacted in an area beyond the stomach (figs. 1 and 2). The duplicate submitted by the parents revealed that the foreign body was a magnetic nail measuring 5 cm. in length. On the afternoon of admission, a 3.5 curved Alnico magnet, which had previously been secured to a child-size Cantor tube⁽⁵⁾ after passage through the nose, was passed into the stomach. At 11:15 P.M. the same day, a roentgenogram showed the magnet still in the fundus of the stomach. The following day, November 8, 1951, the magnet was still in the fundus of the stomach. At 2:00 P.M. on November 8, the magnet had moved from the fundus through the pylorus. At 2:30 P.M. the magnet had

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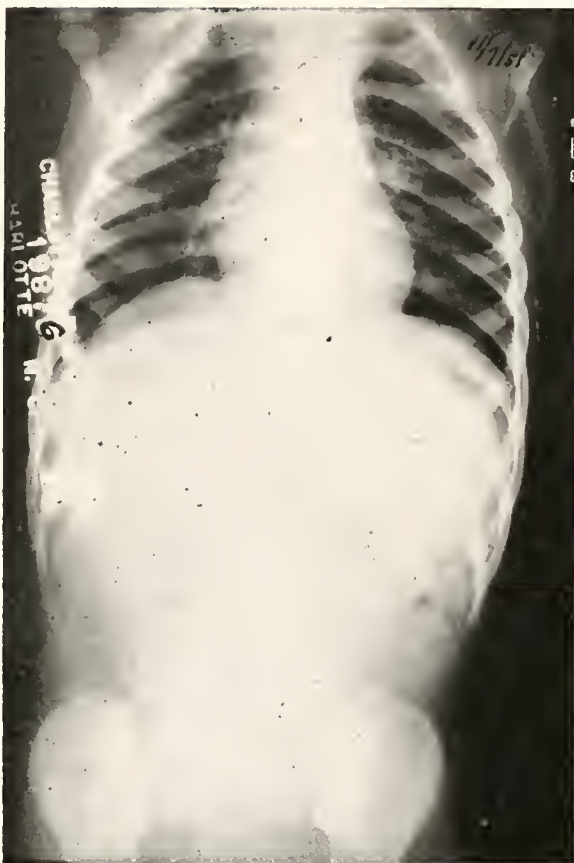


Fig. 1. (Case 1) Roentgenogram showing nail somewhere in the gastrointestinal tract. The stomach is not outlined with gas.



Fig. 2. (Case 1) Lateral film showing nail outside the stomach (outlined with gas following ingestion of Coca-Cola).

progressed into the duodenum. At 4:30 P.M. it was seen to be making definite progress through the turns of the duodenum. At 8:00 P.M. another film revealed that the magnet was still not in contact with the nail. This fact was disappointing, because I believed that the magnet had made its exit from the duodenum even though it had not reached the nail.

On the assumption that the nail was still in the upper jejunum, I allowed more slack by passing approximately 12 more centimeters of tubing into the stomach. At 11:15 P.M. the same day, further roentgen ray studies revealed not only that the magnet had caught up with the nail, but that both had moved beyond the original place of lodgment (fig. 3). I knew that they were somewhere in the jejunum because of the serial roentgen ray studies. Furthermore, calibrated measurements on the tubing clearly indicated that they were well beyond the duodenum.

At approximately 12:00 midnight, November 8, the baby was anesthetized with ether. Under roentgenoscopic guidance, the tubing was gently and slowly pulled up through the nose. It was surprising how easily the magnet and attached nail could be pulled upward through the various turns of the gut. After I had reached the point just below the cricopharyngeus, roentgenoscopy was stopped and the room illuminated. The magnet and attached nail were drawn into the pharynx. With a Jennings mouth gag in position, using indirect lighting, the nail was picked up with a hemostat and removed

from the mouth. The magnet was then removed from the mouth and detached from the tubing, and the tubing pulled out through the nose.

The patient was returned to the room in good condition. Recovery was prompt. The child ate a healthy breakfast the following morning, November 9, 1951.

Triangulation roentgenoscopy

Foreign bodies beyond bronchoscopic visualization require some form of fluoroscopic guidance. Jackson⁽⁷⁾ and his co-workers have used the biplane fluoroscope with success for many years. We at the Charlotte Eye, Ear and Throat Hospital have used a much simpler and more practical device—the triangulation roentgenoscope devised by Dr. W. E. Roberts⁽⁸⁾ of our clinic. Dr. V. K. Hart, also of our clinic, made the first clinical application of this method.

The triangulation roentgenoscope consists of two tubes placed underneath the table on a single carriage, so that the central rays of either tube may be adjusted to any desired angle (crossfire for triangulation). It is a simple procedure to keep the amperage on each tube equalized, because each tube

has its own filament control. The control panel is so wired as to permit the use of one or both tubes. Thus it does not interfere with conventional roentgenoscopy. The shutter opening must be of special design, with a larger aperture.

Since both tubes are activated at the same time, their central rays intersect, and there are two shadows of the foreign body on the fluoroscopic screen instead of one. Any other opaque object which comes into the field, such as a pair of forceps or a magnet, will also produce two shadows on the fluoroscopic screen. If the forceps shadows are to the right or left of the foreign body shadows, but in the same horizontal plane, it is obvious that the forceps are in the wrong vertical plane. If the forceps or magnet are introduced into a plane posterior to the foreign body, the images of the forceps or magnet will be farther apart than the images of the foreign body, because the triangles formed by the intersecting rays to the foreign body and magnet are unequal. Introduction of the forceps or magnet into a plane

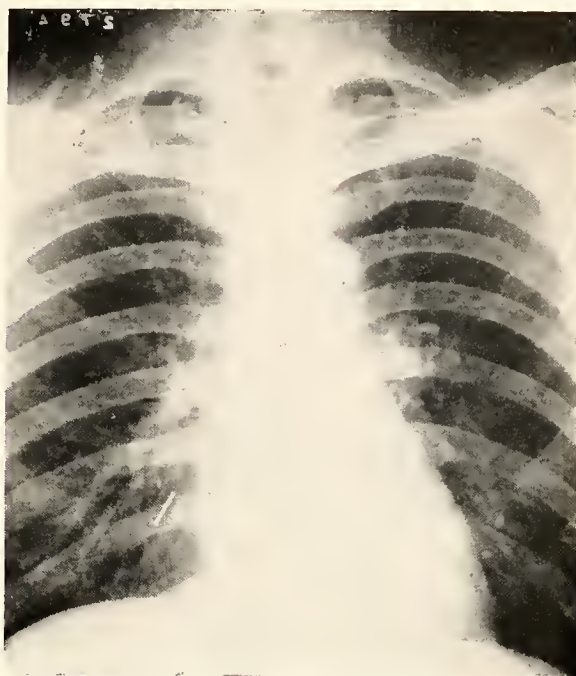


Fig. 4 (Case 2) Postero-anterior roentgenogram showing an escutcheon nail in the posterior basal segment of the right lower lobe bronchus.

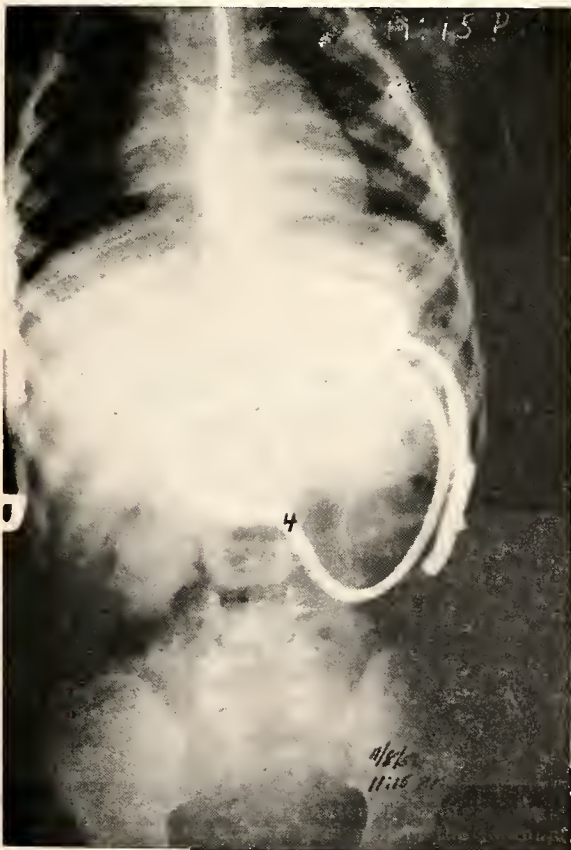


Fig. 3. (Case 1) Posterior-anterior roentgenogram showing contact of magnet and nail in the jejunum as shown by alignment.

anterior to the foreign body will conversely show the forceps or magnet shadows closer together than those of the foreign body. When the forceps or magnet are introduced into the same plane as the foreign body, the distance between the foreign body shadows and the forceps or magnet shadows will be the same. This is true because the triangles formed by the intersecting rays to the foreign body and the forceps or magnet are identical in size.

Case 2*

A white man aged 37, was referred on November 2, 1951. While attempting to weatherstrip his house, he had accidentally aspirated a small escutcheon nail. Roentgenograms revealed the foreign body to be a small nail located in the right lung, probably beyond endoscopic vision (fig. 4). A duplicate of the foreign body proved to be a magnetic escutcheon nail measuring 1.7 cm. in length.

On November 3, 1951, bronchoscopy was done with topical anesthesia and the nail was found to be beyond endoscopic vision. With the aid of triangulation roentgenoscopy, an Equen⁽⁴⁾ bronchoscopic magnet (3 mm. in diameter and attached to a woven stem) was inserted into the various orifices of both the middle and lower lobe bronchi, by the trial and error method. One film showed the magnet to be to the right of the nail. Another film showed that it was to the left of the foreign body. Work was discontinued because it was felt that the patient had had enough manipulation for one day.

On November 5 another attempt to make contact with the nail was unsuccessful.

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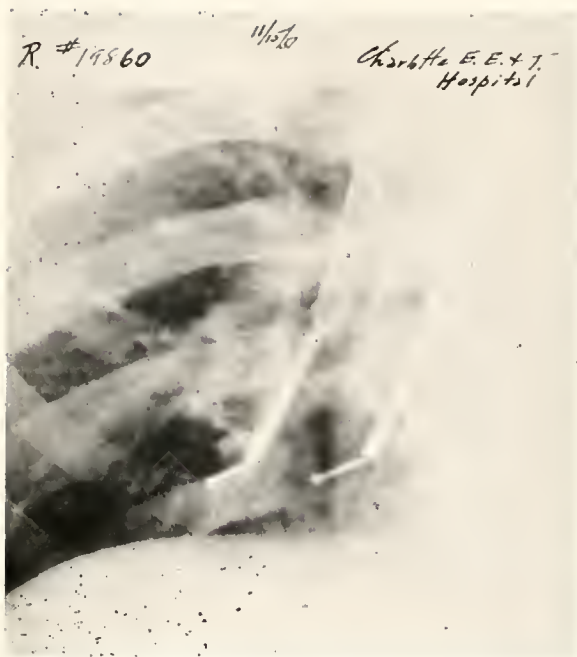


Fig. 5 (Case 2) Roentgenogram showing magnet and attached nail being extracted.

On November 15 the entire procedure was repeated under local anesthesia. A 7 by 40 standard Jackson bronchoscope was introduced without the use of a laryngoscope. The subdivisions of the lower lobe were exposed. The Holinger⁽¹⁰⁾ vertebrated tip magnet was passed into the superior segment, the anterior basal segment, the lateral basal segment, and the medial basal segment⁽¹¹⁾. In none of these was the magnet near the foreign body. The magnet was then passed into the posterior basal segment, and the roentgenoscopist said it was nearer the foreign body than heretofore.

A small segmental orifice of the posterior basal segment was seen anteriorly. This opening would admit neither forceps nor the Holinger vertebrated tip magnet. After some difficulty, the 3 mm. Equen Alnico magnet was passed into this subdivision. As the magnet was advanced, contact was established. Upon withdrawal of the magnet, the nail moved with it (fig. 5). The magnet and attached nail were then extracted through the bronchoscope. The total operating time was approximately 20 minutes. The patient was dismissed the next day, and had no further difficulty.

Summary

A brief historical review of the early development of peroral endoscopy was first presented. Greater emphasis was placed on more recent developments. These are (1) magnetic removal of appropriate foreign bodies, and (2) removal of bronchial foreign bodies beyond bronchoscopic vision by fluoroscopic guidance.

A case illustrating the successful removal of a nail from the jejunum by the use of the Alnico magnet was reviewed. This was apparently the first such case to be reported.

A second case was presented, illustrating the successful use of triangulation fluoroscopy in removing a nail from the lung beyond bronchoscopic vision. Triangulation fluoroscopy for the removal of such metallic foreign bodies was first developed at the Charlotte Eye, Ear and Throat Hospital. We have found it to be much more simple and practical than bi-plane fluoroscopy.

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EARLY EXCISION AND SUCTION OF SNAKEBITE WOUNDS IN DOGS

HENRY M. PARRISH, M.D.*

PHILADELPHIA, PENNSYLVANIA

Do Amaral⁽¹⁾ estimates that 40,000 to 50,000 human beings lose their lives annually throughout the world as a result of snakebite accidents. In India alone approximately 20,000 people and 60,000 cattle are killed each year by the bites of venomous snakes. Here in the United States it has been estimated that 2,000 to 3,000 snakebites occur each year, of which, without specific treatment, 10 to 35 per cent are fatal.

The poisonous snakes of the United States belong to two families: (1) the pit vipers, members of the family Crotalidae; and (2) the coral snakes, members of the genus *Micrurus* of the family Elapidae. Of the pit vipers, the genera infesting the United States are: (a) *Crotalus*, or rattlesnakes; (b) *Agkistrodon*, or moccasins (including the cottonmouth or water moccasin, and the copperhead or highland moccasin); and (c) *Sistrurus*, or ground rattlers. The rattlesnakes are the most dangerous snakes in the United States, for, by virtue of their enormous size, they produce the most venom. All poisonous snakebites are more serious in children.

The M.L.D. (minimum lethal dose) of pit viper venom for man has been estimated at 1.0 mg. of venom for each 6 pounds of body weight, so the amount of venom necessary to kill a 150 pound man would be 25.0 mg. Crimmins⁽²⁾, in a comparative study of poisonous snakes in the United States, determined that the poison glands of the average-sized rattlesnake contain 220 mg., or 9 M.L.D.'s; of the average cottonmouth moccasin, 150 mg., or 6 M.L.D.'s; and of the average copperhead, 45 mg., or 2 M.L.D.'s.

For centuries man has searched without success for a chemical substance that will destroy snake venom in the body and combat the toxic effects of the bite. Among the many and diverse medications that have been administered are: potassium permanganate, procaine, magnesium sulfate, gold salts, alcohol, and kerosene. Although some

of these agents will inactivate venom *in vitro*, they are all ineffective *in vivo*. In recent years antihistamines, cortisone, and ACTH have been tried, but no specific value against envenomization has been proved. The only specific mode of treatment that has been developed so far is neutralization of the venom with antivenin.

The surgical procedures used in treating snakebite wounds include application of tourniquet, incision and drainage, incision and suction, venesection, excision, refrigeration, and amputation.

The treatment of snakebite accepted at present employs a combination of medical and surgical procedures: (1) *local* therapy, including the use of a tourniquet, incision and suction; early injection of antivenin locally to limit slough at the site of the bite; and application of saline compresses; (2) *systemic* therapy, including injection of antivenin intramuscularly, intravenously, or intraperitoneally; blood transfusions; administration of analgesics, sedatives and antibiotics; and injection of tetanus and gas gangrene antitoxin.

Each of these measures is designed to perform one or more of the following functions:

1. Prevent or retard venom absorption locally
2. Remove the venom locally
3. Increase elimination of venom systemically (theoretical only)
4. Neutralize the venom locally
5. Neutralize the venom systemically
6. Prevent local complications
7. Prevent systemic complications

Procedure

The purpose of this study was to compare in dogs the effectiveness of incision and suction with that of excision and suction in the treatment of poisoning with rattlesnake venom. Jackson⁽³⁾ advocates incision and suction for pit viper envenomation, and, in dogs poisoned with 4 M.L.D.'s of rattlesnake venom, has demonstrated survival after treatment in this manner. Clark⁽⁴⁾ has suggested that simple incision does not always reach the venom pocket under the skin, as the venom is not deposited immediately beneath the puncture wound, owing to the curve of the snake's fangs. Allen⁽⁵⁾, experimenting with rabbits and cats, found excision useless because the venom was disseminated too rapidly. He concluded that excision

From the Harrison Department of Surgical Research, School of Medicine, University of Pennsylvania, Philadelphia.

* Present address: Assistant Resident, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

must be extensive and performed early in order to be effective.

Poisonous snakebite wounds are contaminated, venom-laden, anaerobic, necrotic puncture wounds, which predispose to infection and tissue destruction. Jackson⁽⁶⁾ has reported a high incidence of clostridia in snakes' mouths and in the wounds infected by poisonous reptiles. Thus infection and sepsis may contribute largely to morbidity and mortality in some snakebite accidents when the venom itself may have been insufficiently toxic to produce death. Since the tissues surrounding the punctures infected by the snake's fangs are usually heavily contaminated with bacteria as well as impregnated with venom, adequate excision and surgical debridement should be of advantage in converting such wounds into clean, open lesions free of venom, necrotic tissue, and contamination with anaerobic pathogens. By excision and suction, then, (1) more venom could be removed locally, leaving less venom available for absorption; (2) local complications, such as tetanus, gas gangrene and other infections, and tissue necrosis would be diminished; and (3) systemic damage from envenomation would be lessened.

Materials and Methods

Dried crystalline *Crotalus atrox* venom was used in this study. The venom was dissolved in an 0.85 per cent solution of sodium chloride so that 1 cc. of solution contained 0.05 Gm. venom.

The anesthetic, veterinary sodium Nembutal, 60 mg. per cubic centimeter, was administered in a dose of 0.4 cc. per kilogram of body weight, plus 1 cc. to the calculated dose. This dose was repeated, if necessary, to avert pain before conclusion of the experiment.

The hydrated venom was injected, with a 20 gauge hypodermic needle, to a depth of $\frac{1}{4}$ inch into the hock of mongrel dogs. Jackson has determined the minimum lethal dose for dogs as being 2 mg. venom per kilogram of body weight.

The animals were also given 300,000 units of procaine penicillin intramuscularly before the injection of venom, and 300,000 units on each subsequent day of survival, so that the results of the experiment would not be clouded by infection as a cause of death.

Since, in Jackson's experiments, dogs given 4 M.L.D.'s of venom survived when

treated by incision and suction, the animals in this study were given 6 M.L.D.'s to determine whether there was any significant difference in survival after treatment by excision and suction.

Three minutes after injection of the venom a tourniquet was applied proximal to the site of injection. The tourniquet was applied tightly enough to obstruct lymphatic and venous flow but not arterial flow. It was kept in place for a period of 30 minutes, and advanced up the limb as the swelling progressed. Thirty minutes after the venom was injected all animals were treated intensively, either by excision and suction or incision and suction, with continuance of suction for a period of five hours. Becton-Dickinson Asepto Suction Cups were used for the mechanical removal of the venom. Suction was applied intermittently for a total of 30 minutes in each hour. When the suction cups were not in place, the wound was covered with warm saline compresses.

The question arose as to what constitutes an adequate area of excision. Little work has been done on the rate of spread of snake venom. Preliminary experiments were performed on 2 dogs, using India ink as an indicator of venom spread. India ink was mixed with 2 M.L.D.'s of venom and injected into 2 dogs. At the end of one hour the animals were sacrificed and the area of ink dissemination from the site of injection was measured. In 1 dog this area measured 7 by 7 by 4 by 5 cm., and in the other, 7 by 6 by 6 by 4 cm. The direction of greatest spread was lengthwise the extremity in each case. The area selected for excision was 7 cm. in diameter. This measurement was arbitrarily chosen because most of the venom could be removed by excising such an area without creating too large a defect on the leg of the animal. Tissue was excised down to the muscular layer, since our findings agreed with those of Fidler and co-workers⁽⁷⁾, who described the spread of snake venom by way of the lymphatics and subcutaneous tissues.

Results

All animals died that had been given 6 M.L.D.'s of *Crotalus atrox* venom and treated 30 minutes later by incision and suction. The longest period of survival was 19 hours in 1 animal. The average survival time was 12 hours and 15 minutes. These animals received an average of 17 cruciform incisions

Table 1
Comparison of Excision and Suction with Incision and Suction
in *Crotalus Atrox* Venom Poisoning in Dogs

Experiment No.	Sex	Weight in kilos	No. M.L.D.'s (1 M.L.D. = 2 mg./kilo)	Total no. mg.	Treatment	Time Begun	Results
1	M	8.0	1	16.0	Control	—	Death after 22 hours
2	M	16.0	6	192.0	E.S.	60 min.	Survived
3	F	11.3	6	135.6	E.S.	60 min.	Death after 5 hours unexpectedly
4	F	7.0	6	84.0	E.S.	60 min.	Survived
5	F	13.6	6	163.0	E.S.	30 min.	Survived
6	F	10.4	6	125.0	E.S.	30 min.	Death after 16 hours
7	M	12.0	6	144.0	E.S.	30 min.	Survived
8	M	8.0	Injected with 40 cc. suction fluid withdrawn from dog #7 after 1 hour treatment				Death after 40 hours
9	M	6.8	1	13.6	Control	—	Death after 13 hours
10	M	8.6	6	103.0	I.S.	30 min.	Death after 13½ hours
11	F	11.8	6	142.0	I.S.	30 min.	Death after 12 hours
12	F	10.9	6	131.0	I.S.	30 min.	Death after 7 hours
13	F	7.3	6	88.0	I.S.	30 min.	Death after 19 hours
14	M	11.5	6	138.0	I.S.	30 min.	Death after 16 hours
15	F	6.7	6	80.0	I.S.	30 min.	Death after 6 hours

7 mm. long and 7 mm. deep for suction purposes.

In spite of vigorous suction there was marked swelling and hemorrhagic necrosis of the involved extremities.

Two of the 3 animals treated by excision and suction 30 minutes after injection of venom survived. The third animal expired 16 hours after injection of the venom. Because the results looked promising it was decided to delay treatment by excision and suction for 60 minutes in 3 animals. Again, 2 of the 3 animals survived. The third animal died unexpectedly five hours after the injection of venom. This dog exhibited signs of shock, from which it did not recover. In all of the animals treated by excision and suction, swelling of the involved extremity from the envenomation was not appreciably less than in those treated by incision and suction. In 2 of these 6 animals, secondary wound infections developed, but responded to antibiotics and warm soaks. Evidence of wound-healing by granulation tissue in all of the surviving animals indicated that these

wounds might have been repaired by skin grafts. The bloody material removed from the seventh animal after one hour of suction was injected into the eighth animal and produced death in 40 hours.

Thus all the animals given 6 M.L.D.'s of venom and treated 30 minutes later by incision and suction died, whereas two thirds of the animals treated by excision and suction 30 minutes later survived. Also, two thirds of the animals treated by the latter method 60 minutes after injection of 6 M.L.D.'s of venom survived. It may be concluded, therefore, that early and wide excision and suction is worth while in removing venom and lysolecithin from poisonous snakebite wounds.

Excision on the extremities is feasible, since the tourniquet provides adequate control of hemostasis if applied tightly enough to control arterial bleeding. Surprisingly little active bleeding was encountered in these experiments, owing, possibly, to the massive tissue edema and hemorrhagic necrosis, with liberation of large amounts of

thromboplastin. If performed under local procaine anesthesia, excision of a 7 cm. area could cause no more, and possibly less, discomfort than the infliction of 20 to 50 cruciform incisions.

The site of the bite, however, may limit the use of excision as a means of therapy. It is obvious that if the bite occurred on a digit or in close proximity to important nerves or blood vessels, this method should not be used. Bites on the trunk might be treated effectively by excision and suction if seen within one hour. Since a tourniquet is not applicable to this location, venom spread could not be mechanically retarded. Our experiments seem to demonstrate that more of the toxic products of envenomation can be removed by excision and suction than by incision and suction.

Comment

I feel that all poisonous snakebites should receive adequate surgical treatment, either by incision and suction or excision and suction. Excision and suction, however, ideally should be performed under local anesthesia by a physician or some other suitably trained person.

Excision of the wounds, with suction, is not offered as a substitute for incision and suction if the bite is seen *after* one hour, or if the snake involved was a small one which would be likely to eject a small amount of venom; *nor does this procedure take the place of antivenin, antibiotics, antitoxin and blood transfusion* in the treatment of any snakebite.

Our preliminary experiments demonstrate that excision and suction is an effective means of surgical treatment for snakebite wounds. Therefore, *wide* excision and suction may be recommended as treatment for poisonous snakebite if: (1) the guilty reptile was a large one, which might have ejected a large amount of venom; (2) the bite occurred on the trunk, where tourniquets are inapplicable, and the wounds are seen *early*; (3) the site of the bite is suitable for excision; (4) the patient is seen *within 60 minutes* after the bite; (5) no antivenin or adjunctive medication is available.

Summary

The efficacy of treatment by *wide* excision and suction is compared with the results of

incision and suction in poisoning of dogs with *C. atrox* venom. All animals died that were given 6 M.L.D.'s of venom and treated by incision and suction, whereas two thirds of the animals survived that were treated by early and wide excision and suction. Excision and suction, therefore, is considered an effective form of surgical treatment in poisonous snakebite if the victim is seen *early* and an *adequate amount of tissue is excised*.

The author acknowledges with gratitude the helpful suggestions of Dr. Jonathan Rhodes, professor of surgery at the School of Medicine, University of Pennsylvania; Eleanor Buckley, of the Medical Department, Wyeth Laboratories; and Ross Allen, of the Florida Reptile Institute, Silver Springs, Florida.

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The continuing mortality of acute appendicitis is, I believe, chiefly due to a widespread failure to realize how frequently its manifestations are atypical. That failure was more conspicuous in my most recent analysis of the disease at the New Orleans Charity Hospital than it was in some of the earlier series. When we find residents from medical schools all over the country talking about clinical pictures "not consistent with acute appendicitis," one is justified in wondering how correctly this disease is being taught in those schools. "The high fever in this case would seem to rule out acute appendicitis," read one notation. Unfortunately, it did not; the man had a ruptured appendix. "The diagnosis in this case is only 40 per cent appendicitis," read another notation. On that basis the man was not admitted to the hospital when he first applied. When he was operated on upon his return, 24 hours later, his appendix also was ruptured. "Since acute appendicitis cannot positively be ruled out in this case," read still another note, "this patient should be re-evaluated at the end of 24 hours." This physician had the right notion but his timing was bad. A great deal may happen in acute appendicitis within 12 hours. Of 298 patients admitted to the hospital within this period in the last series of cases analyzed, 22 had gangrenous appendices, 18 had ruptured appendices, and one had an appendiceal abscess.—Boyce, F. F.: Atypical Disease in the Mortality of Appendicitis, Ann. Int. Med. 40:674 (April) 1954.

CONTRAINDICATIONS TO THE USE OF LARGE AMOUNTS OF SODIUM LACTATE

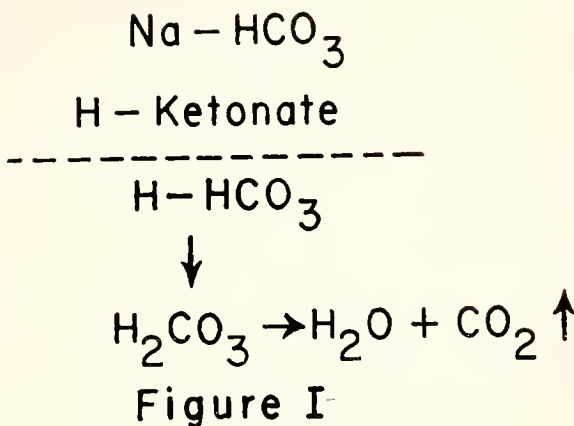
WESTON M. KELSEY, M.D.

WINSTON-SALEM

About 20 years ago clinical studies showed that the use of parenteral sodium lactate improved the clinical course of patients with diarrhea and acidosis⁽¹⁾. It is not clear how much of the improvement seen in these patients should be ascribed to the expansion of the extracellular fluids by the sodium and water and how much to the effect of the bicarbonate on the serum pH. In the past 10 years the experience of a large group of workers would suggest that large amounts of sodium lactate are not necessary for satisfactory therapy and that certain undesirable events may occur when large amounts are given. The following discussion will review briefly the role of bicarbonate in disease states, and complications of excessive sodium lactate or sodium bicarbonate therapy.

The Use of Bicarbonate in Disease States

Usually sodium lactate is used with the intent of raising the serum bicarbonate as measured by the carbon dioxide combining power or the carbon dioxide content. Before attempting to raise the bicarbonate we should consider the mechanisms which cause a drop in the bicarbonate. There is probably never a primary deficit of bicarbonate, because of the tremendous amount produced as an end product of metabolism of food. Therefore a low serum bicarbonate content can be caused by only two general mechanisms: (1) the loss from the body of sodium with bicarbonate, as occurs in diarrhea; (2) the replacement of the bicarbonate by another anion. This can occur without significant loss of sodium, as is the case when ammonium chloride is used, or in the presence of ketosis. Figure 1 shows what happens when ketones appear in the body. The hydrogen ion from the ketone associates with the bicarbonate and is excreted by the lungs as carbon dioxide. It should be noted that there is no measurable loss of sodium in ketosis of short duration. Prompt repair of the ketotic



state results in correction of acidosis without need for sodium lactate.

One should consider what adverse physiologic events result from a low bicarbonate content before instituting measures to alter it. The only constant effect is on the pH. The physiologic consequences of a decreasing pH, if within reasonable limits, are not clear⁽²⁾. The serum pH must be raised promptly only when excessively low. Even under this condition data to indicate how fast or how far the pH should be raised for optimal results are not available. If the pH is low, sodium lactate solutions may be used, because almost always there is a deficit of fluids and electrolytes which require the use of a solution containing electrolytes.

We might now review some of the clinical states which require sodium lactate therapy. The first is that found in the patient who has lost sodium, bicarbonate, and water; the second, in the patient with such severe acidosis that it is felt necessary to raise the pH immediately. The patient with ketosis of considerable duration has lost sodium in conjunction with ketones in the urine and may benefit from sodium lactate treatment. Lastly, sodium lactate may be used in treatment of salicylism, not necessarily to correct the bicarbonate deficit, but because it may facilitate excretion of salicylate⁽³⁾.

Adverse Effects of Excessive Use Of Sodium Lactate

We should now consider the possible harm which may arise from excessive use of sodium lactate. It may cause alkalosis, hypernatremia, aggravation of an existing potassium deficit, and edema.

Alkalosis and hypernatremia

The theoretical explanation of the occur-

Read before the American Academy of Pediatrics, Palmer House, Chicago, Illinois, October 4, 1954.

From the Department of Pediatrics, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

Table 1

Na 20 — HCO_3 20
Na 10 — HCO_3 10
Na 10 — Ketones 10
Na 20 — HCO_3 20
Na 10 — Ketones 10
Na 30 — HCO_3 30

rence of alkalosis and hypernatremia in a ketotic patient overtreated with sodium lactate is simple. Table 1 shows what happens when the ketosis is corrected before the serum sodium drops. Since the sodium concentration is increased without other fixed anions, it is obvious that overcorrection of the bicarbonate deficit will occur and the sodium concentration rise. It is a fact that excessive sodium administration may cause a negative potassium balance⁽⁴⁾. The "post acidotic state" described by Rapoport and others⁽⁵⁾ probably is caused by excessive administration of sodium⁽⁶⁾. Since sodium is primarily confined to the extracellular space, it is obvious that a large proportion of the administered sodium will stay in this space. If the amount is excessive, it may cause congestive heart failure from expansion of the vascular volume. It also may produce edema without optimal correction of the intracellular deficit⁽⁷⁾.

Calculation for Use of Sodium Lactate

We cannot illustrate clinical examples of all of these complications, possibly because of the long standing policy of the Pediatric Service of the North Carolina Baptist Hospital to restrict sodium administration to a minimum. A simple calculation for the use of sodium lactate has been used on this service for five years. When given in the manner to be described, sodium lactate has resulted in satisfactory clinical improvement without producing any of the adverse effects which have been discussed. If the deficit of serum bicarbonate per liter is known and the extracellular volume can be estimated, the total bicarbonate deficit can be determined. Replacement of this deficit should raise the bicarbonate to normal. Since some of the sodium will go into cells and some into bone, this calculation will achieve about 60 to 70 per cent of the expected correction.

Table 2 shows this calculation. The patient is an infant weighing 10 kilograms,

Table 2

Wt.—10.0 Kg. HCO_3 —10 mEq/L
Deficit = 10 mEq/L of ECF
ECF = 20% of Body Wt. — 2.0 L.
Total HCO_3 Deficit — 20.0 mEq
6 cc. of 1/6 M NaLactate = 1.0 mEq
6 × 20 = 120 cc. to replace deficit

with a carbon dioxide combining power of 10 milli-equivalents per liter. His approximate deficit is about 10 milli-equivalents per liter of extracellular fluid. The extracellular fluid is about 20 per cent of the body weight, or about 2.0 liters. The total deficit is 20 milli-equivalents. By definition, 6 ml. of 1/6 molar sodium lactate has 1 milli-equivalent each of sodium and lactate. Therefore it will take 120 milliliters to replace the deficit—as compared with the 420 milliliters which would be given if the calculation contained in a pediatric textbook were used⁽⁸⁾.

Table 3

	Diabetes		
	M.L. Wt. — 30 Kg.		
	Ketonuria	HCO_3	Cl_2
11-24-50	4+	1.4	98.4
	120 mEq NaLactate		
11-25-50	trace	18.5	101.5
11-26-50	0	22.0	

Table 4

	Diabetes				
	M.L. Wt. — 37 Kg.				
	Ketonuria	HCO_3	Cl_2	Na	K
10-4-52	4+	5.0	—	—	—
	334 mEq NaLactate				
10-5-52	trace	33.7	90.0	139	2.73

Table 3 represents a diabetic patient treated with a smaller amount of sodium lactate. It will be noted that the bicarbonate returned promptly to a satisfactory level and then remained within normal limits. Figure 4 shows the same patient during a later admission, when she received the larger amount of sodium lactate. The serum bicarbonate rose beyond the normal value and remained there. It will be noted that the serum potassium was low. In all the diabetic patients we treated according to the calculation from the text mentioned previously, there has been overcorrection of the bicar-

Table 5

Diarrhea

J. C. Wt. — 3.0 Kg.

	Ketonuria	HCO ₃	Cl
10- 8-50	0	8.6	—
7.0 mEq NaLactate	—	40 cc.	1/6 M.
10- 9-50	0	14.5	105.4
	No NaLactate		
10-11-50	0	24.0	102.0

Table 6

Diarrhea — Hyperelectrolytemia

D.M. Wt. — 6.0 Kg.

	Ketonuria	HCO ₃	Cl	Na	K
3-5-54	trace	10.3	145.0	151.5	4.50
	No Lactate				
3-8-54	0	23.4	100.5	137.5	4.38

bonate deficit if the bicarbonate was determined after the immediate recovery period was over. Table 5 merely represents the course of an infant with severe diarrhea treated with the smaller amount of lactate. The carbon dioxide combining power rose to satisfactory levels in one day, and without further therapy to normal in two days. Table 6 shows a patient with hypernatremia. Since the serum sodium was already high, no sodium lactate was given; yet the carbon dioxide combining power promptly returned to normal.

Summary

Indications for sodium lactate therapy have been reviewed. Complications arising from excessive sodium lactate intake have been discussed. A simple physiologic method for the correction of bicarbonate deficits has been described. Evidence that this method will result in adequate repair without causing undesirable complications has been presented.

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FUNCTIONAL LOSS OF MEMORY
IN A PREADOLESCENT BOY

DOUGLAS POWERS, M.D.

CHARLOTTESVILLE, VIRGINIA

Loss of memory may result from organic trauma to the central nervous system or from emotional trauma. Familiar illustrations are the loss of memory following a brain concussion and that in men subjected to severe stresses of combat. Oftentimes the two conditions occur together and seem to augment each other.

Causes and Types of Amnesia

Infantile amnesia, the universally observed inability to recall the events of the first few years of life, is perhaps due to the immature development of the myelin and the central nervous system, and also to the repression of impulses, which apparently begins in the very early years of life.

Psychogenic amnesia is considered to be similar to the other hysterical or dissociative reactions which are manifested by a multiplicity of symptoms such as sensory, motor, or vasomotor disturbances. Examples are the parasthesias, visual, postural and speech disturbances, deafness, paralysis, anorexia and dermatographia.

For clarification psychogenic amnesia is separated into anterograde and retrograde types. In the former the person is apparently unable to fix or record impressions of events as they occur, so that there is no memory for events which have taken place since the onset of the disturbance; while in the latter he is unable to recall or retain memories of events that occurred before the attack or disorder.

Most observers state in effect that the basis for the symptoms in the dissociative reactions is some incompletely repressed conflict which is highly charged with emotion, and that the symptoms are conversions of the wishes, repressed ideas, and undesirable emotional states into somatic manifestations, episodic performances, or states. The foundation for such a concept was laid by Freud and Breuer when they observed that some hysterical patients lost their symptoms if certain emotionally charged memories of which the patient had been unaware pre-

From the University of Virginia Hospital, Charlottesville, Virginia.

viously were brought to consciousness and the emotional tension discharged.

Incidence in Children and Adolescents

According to Kanner⁽¹⁾ the hysterical symptoms most frequently observed in children are blindness, deafness, and paralysis of a limb. Although combinations of symptoms do occur, single symptoms are more likely to predominate in children than in adults.

The amnesias of psychogenic origin are most likely to occur in adulthood, although they are not uncommon during adolescence. The incidence in adolescents is greater among girls than among boys, and this holds true for their counterparts during the adult years.

A survey of available literature does not disclose a report of functional amnesia in a child below the age of adolescence, and discussions with physicians and others who have worked with children for many years likewise indicate that such an occurrence is most unusual. Hence, the following case description seems justified.

Report of a Case

John, an 11 year old white boy, was brought to the hospital one evening by his father, mother, and several relatives, with the complaint that he did not seem to remember anything, to recognize anyone in the family, or to recall his own name. They reported that he had disappeared from home early that morning and had not been seen again until late in the afternoon. A farmer then found him wandering in a field of the paternal grandfather's farm, which was several miles from John's home. The farmer described him as "not knowing anything and being dazed."

The history revealed no previous episodes of this nature and no serious illnesses in the boy's life. There was no history of somnambulism, loss of consciousness, or convulsions. The family history was negative for convulsive disorders. There had been no trauma to the head and no accidents or operations. This boy was one of six children in the family, being next to the youngest child.

The physical examination was essentially normal, and a detailed neurologic examination was normal. There was no evidence that his reproductive system had become functionally operative—that is, he had not en-

tered the zone of genital growth, and there was no proliferation of pubic or axillary hair or change in the quality of his voice. The temperature on admission was 99 F. by mouth. The white blood cell count was 10,000, with 80 per cent polymorphonuclear leukocytes and 20 per cent lymphocytes. The hemoglobin was 90 per cent (Sahli).

On mental examination he appeared to be disoriented as to time, place, and person; and the general appearance was one of loss of contact with the environment.

Quite slowly he was given 10 cc of sterile water containing 0.25 Gm. of sodium amytal and 5 mg. of methamphetamine hydrochloride. Rather quickly he appeared to lose the confusion and "dazed expression," and began to discuss the events of the preceding day. The night prior to admission to the hospital he had received a severe whipping from his father after one of his playmates had accused him of stealing a toy pistol, although he related that he had not stolen the pistol and had attempted to explain this to his father. Early the next morning, after a restless night, he was on the porch of his home when he saw the boy who had accused him coming toward his home. Suddenly he became "dizzy" and immediately thought of going to see his grandfather to whom he was quite emotionally attached. He could not recall clearly all that had happened during the 12 hours he had rambled in the fields, but reported being aware that he wanted to find his grandfather. He could recall the farmer finding him in the field and taking him to his grandfather's home.

As he recounted these events, considerable emotion was manifested by flushing of the face, increased pulse rate, increased rate and excursion of respirations, and extreme restlessness. After talking at some length, he appeared to be in good contact, recognizing members of his family, but was still quite apprehensive. The events surrounding the onset of the amnesic period were verified by members of the family. He slept well that night with the help of mild sedation. Next day he complained of "slight dizziness" on one occasion and some "tightness" in his chest; however this symptom subsided within a few hours and there was no further recurrence. While in the hospital he continued to talk freely about his experience. He was seen at irregular intervals during the next year and always appeared eager to talk with

the physician about his interests and activities. This relationship seemed to have a very positive meaning for him.

Comment

The onset and end of the loss of memory in this boy was clearly demarcated and abrupt, as is observed in similar reactions in adolescents and adults. The amnesia appeared to be rather complete in that it was both retrograde and anterograde, with a loss of personal identity and loss of identity of others. Hammerman⁽²⁾ has suggested that in such an amnesic state the person lives out unconscious fantasies in motor activity. This appeared to be true in this case, as demonstrated by the boy's flight from the threatening forces at home, thus affording him immediate protection. At the same time, his observation, registration, retention, and subsequent recall of events implies purposiveness and a long-range goal in the temporary amnesia—that of bringing to his father's attention the unfairness of the punishment to which he had been subjected, and of seeking an improved relationship with his father. Such improvement seemed to occur during the subsequent months, inasmuch as the father took a greater interest in the boy and seemed to be more aware of his needs.

Serial observation and reports for five years indicate no further amnesic episodes or related symptoms and no evidences of manifest neurotic symptoms. This boy gave the impression of being above average in intelligence, and reports show that he has a good academic record in school. In addition he has become an outstanding basketball and baseball performer on his school team and is a popular member of his class.

Summary

Because of the infrequency of its occurrence, a case of functional loss of memory in a preadolescent boy has been presented, with a description of the events surrounding the amnesia as reconstructed by the boy and confirmed by the family. This isolated episode of amnesia served a definite purpose for this boy as such episodes so commonly do in adolescents and adults. Once his communication was understood and his rightful needs given appropriate attention, it was no

longer necessary for him to react in such a manner, as is demonstrated by his continuing healthy adjustment.

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A METHOD OF TREATING CHRONIC LEG ULCERS

SHERWOOD W. BAREFOOT, M.D.
GREENSBORO

At one time or another numerous forms of treatment for chronic leg ulcers have been in vogue. In the main, certain general principles as outlined in a previous report⁽¹⁾ have been followed. During the past year a method of treatment has been tried and proved to be of sufficient merit to warrant recording the details of the regimen and the results.

This treatment entails the local use of absorbable gelatin sponge or powder (Gelfoam*) and the parenteral administration of vitamin B₁₂. The former has previously been used in the treatment of leg ulcers⁽²⁾. My experience with vitamin B₁₂ in such patients began after I observed a trophic ulcer in a diabetic patient, which had failed to respond to every known form of therapy, heal promptly after the patient had been placed on large doses of vitamin B₁₂ for "arthritis" by another physician. Recently, it has been shown experimentally that vitamin B₁₂ in the presence of an adequate protein diet favorably influences wound healing in animals⁽³⁾.

Method

When first seen, most patients with chronic leg ulcers are found to have considerable secondary infection of the lesions, along with edema around and below the ulcers. It is usually necessary to put these patients to bed for a few days, treating them with elevation of the affected foot, wet dressings, and antibiotics or chemotherapy given by mouth.

After the gross secondary infection and edema have subsided, the ulcers are sprinkled heavily with Terramycin Topical Powder** (containing oxytetracycline hydro-

*The Upjohn Company.

**Chas. Pfizer & Company, Inc.

chloride, 30 mg. and Polymixin B sulfate, 10,000 units per gram), packed with the absorbable gelatin, and a supportive boot is applied from the base of the toes to the knee, using an adhesive elastic bandage (Elastoplast*). After this, the patient may be up and about. The adhesive surface of the elastic bandage should not be applied directly to the skin. A layer of gauze bandage may be applied first or the outer, non-adhesive surface may be placed next to the skin. This boot is removed and reapplied weekly, at which time from 30 to 45 micrograms of vitamin B₁₂ are given subcutaneously or intramuscularly.

On removal of the boot during the first two or three weeks, the absorbable gelatin will usually be found loose in the ulcer, having been washed from the tissues by the oozing of serum. At such times the ulcer is cleansed with ether and hydrogen peroxide, debrided, and the Terramycin Topical Powder and absorbable gelatin are reapplied. When the ulcers are debrided, it is particularly important not only to remove crusts and devitalized tissue, but also to make perpendicular incisions through any scar tissue which may have formed around the borders, to the point that good oozing of blood is obtained. This affords epithelial cells the opportunity to proliferate into the ulcer, and the bleeding helps the absorbable gelatin to become adherent in the ulcer.

Usually, after two or three weeks the absorbable gelatin will be found adherent or fixed in the ulcer. As long as no pus exudes from the borders, it is left in place, covered with the antibiotic powder, and saturated with normal saline at weekly intervals when the boot is changed. By the time the absorbable gelatin has become firmly adherent, the edema frequently has subsided to the extent that an ordinary Ace elastic bandage, which the patient may apply himself, may be substituted for the elastic adhesive boot, but the local application of antibiotic powder and normal saline to the absorbable gelatin and the administration of vitamin B₁₂ parenterally at weekly intervals are continued.

When complete healing has occurred beneath the absorbable gelatin, it becomes loose and falls free, or it may be easily wiped off. It is then necessary, of course, to take steps to prevent future ulcers, such as surgery for varicose veins when these account

for the stasis, or the constant use of elastic supportive bandages in instances of old, deep thrombophlebitis, when the patient is on his feet.

Material and Results

Twenty-three patients with chronic stasis leg ulcers secondary to varicosities or to old thrombophlebitis have been treated with this method. All ulcers have healed, the time required for healing varying with the size and duration of the lesions. None of the patients had diabetes or anemia of significant degree.

Two of these patients had previously been treated by me for leg ulcers without the use of absorbable gelatin or vitamin B₁₂. It is estimated that comparable ulcers in these 2 patients treated with absorbable gelatin and vitamin B₁₂ healed in from 60 to 75 per cent of the time required when they were not used. This time relationship corresponds to the general clinical impression about other patients treated with and without absorbable gelatin and vitamin B₁₂. This impression can not be proven by controls because of the diversity of factors involved in the healing of leg ulcers.

One patient was treated with absorbable gelatin, antibiotic powder, and vitamin B₁₂ for an ulcer of the bridge of the nose which had followed severe radiodermatitis after treatment of an epithelioma. This ulcer had not healed in two years despite various forms of conventional therapy, whereas healing was complete after treatment for four months with this regimen.

Summary

A therapeutic regimen for chronic leg ulcers consisting of antibiotic powder and absorbable gelatin applied locally, and vitamin B₁₂ given parenterally has been outlined. Twenty-three patients with such lesions have been treated with gratifying results. An ulcer of the nose complicating severe radiodermatitis healed within four months on this regimen after having resisted prior therapy for two years.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

MARCH, 1955

CONSTRUCTIVE SUGGESTIONS FOR A FEDERAL BUDGET

The Committee for Economic Development (C.E.D.) is a non-partisan, non-profit organization composed of citizens interested in a sound economic policy for the United States. More than two years ago this committee began an intensive study on the control of federal government expenditures, and has recently issued its report, the full text of which may be obtained from the Committee for Economic Development, 444 Madison Avenue, New York 22.

Among the committee's most important recommendations are:

"1. Changes in the preparation and form of the budget, to give Congress and the public a clearer picture of the proposed activities, their relative necessity and their cost
...

"2. Creation of a Joint Budget Policy Conference as a step toward coordinating expenditure decisions and revenue decisions in Congress. The Joint Conference 'would include several members of the Congressional leadership and majority and minority representatives from the appropriations and revenue committees and the Joint Committee on the Economic Report.' It would meet after the President has submitted the budget and discuss the major expenditure-revenue problems involved.

"3. Improvements in Congressional procedures for considering expenditures, and authorization for the President to veto individual items in appropriations bills (without having to veto the entire bill).

"4. Establishment of a system of annual performance reports and periodic management audits of executive departments and large agencies . . ."

The committee pointed out that in 1954 the federal government absorbed about 16 per cent of all the goods and services produced in the United States, as compared with about 5 per cent in 1939 and only 1 per cent in 1929.

The committee hopes that its proposals would remedy the more glaring defects in the budget process. These weaknesses were listed as follows:

- "1. The budget contains too much detail that is not relevant to major budget issues . . .
- "2. There is no systematic procedure in Congress to insure consideration of problems involving relations between expenditures and revenues.
- "3. The budget process in Congress is splintered. Expenditure decisions tend to be made one by one without weighing against one another the competing claims of the various government programs.
- "4. There is no systemic review of performance or evaluation of efficiency."

The committee further contends that the description of services is too vague, and the budget document contains such a vast amount of detail that the major budget issues are obscured. It believes that the revenue committees and the appropriations committees act largely independently of each other. Finally, it suggests that committee reports on bills authorizing new activities should be required to include estimates and discussions of eventual cost.

Certainly there is need for all possible tightening up of controls on government expenditures, and apparently the Committee on Economic Development has gone a long way toward formulating constructive suggestions for accomplishing this purpose.

THE ANNUAL MEETING

This issue contains the tentative program for the annual meeting of the State Society, which is to be held as usual at Pinehurst, May 2-4. This program is largely responsible for the delay in getting the March issue to press—but it seems that its preparation is inevitably hampered by one thing after another. Anyhow, it is to be hoped that our members will forgive the lateness of publication when they see how attractive a medical menu has been prepared for those who attend the session.

Last year's centennial meeting was, of course, a high light in the life of our Society; but it is hoped that the beginning of the second century of the Society's existence will be considered just as important as was ending the first.

* * *

EASTER SEALS ARE SYMBOLS OF HOPE*

As the Easter season comes upon us, let us bring its true spirit alive through new hope and rebirth for crippled children.

Symbolized through the traditional Easter Seal, the cause of crippled children will reach millions of Americans during the 1955 campaign, March 10 to April 10.

As contributors to the annual Easter Seal appeal, this nation's citizens have expanded the Easter Seal Societies across the nation into a federation embracing more than 1,600 affiliates throughout the United States and extending into Alaska, Hawaii and Puerto Rico.

Americans, through their Easter Seal contributions have done more to aid the crippled during this time than ever before in history. Through their demonstrated concern for their fellowmen, they have opened the doors of living for the handicapped.

And the handicapped, themselves, through courage and determination have proven the inspiring human greatness which can be found in all men.

Through the annual Easter Seal campaign comes an opportunity for all Americans to assure the continuation and expansion of medical care, therapy, recreation and special education services provided by the Easter Seal Societies. Let us see to it that the "sym-

bols of hope"—the diagnostic clinics, rehabilitation centers, camps, convalescent hospitals, treatment and training centers, special classes, sheltered and curative workshops—are maintained and expanded to serve more and more crippled children as their needs continue to increase.

It is up to all of us to set the hopes of crippled children high, and we can do it by giving as generously as we can to the 1955 Easter Seal drive.

YOO YOO—A NEW SYNONYM FOR G.O.K.

In the *New England Journal of Medicine* for February 17 (page 274) Dr. Howard R. Bierman told of a patient with obscure symptoms whom he had seen while visiting a hospital in another city. The patient had been studied in still another medical center, and on his record a diagnosis of "Yoo Yoo" had been made by a house officer. All the consultants admitted their ignorance of the disease in question. When he got back home Dr. Bierman began asking his faculty colleagues if they knew what the term meant. None of them was able to enlighten him, but the mystery was finally solved by the youngest resident, who produced the second edition of *STANDARD NOMENCLATURE OF DISEASES*, and pointed to a reference on page XII, to "Yoo-Yoo . . . complete ignorance of the nature of a disease both as to location and cause."

A senior attending physician of a teaching institution in this state was so intrigued by the new term that he asked a group of medical house officers if they had ever heard of Yoo Yoo. It was somewhat of a blow to his pride to have them give the answer promptly—basing it on their experience in coding charts.

Doubtless most medical veterans are familiar with the term "G.O.K." This is usually credited to Dr. Osler, who is said to have seen it on many records in a hospital he was visiting. When he admitted his ignorance and asked for a definition of the term, he was told that it was an abbreviation for "God only knows." While change is not always progress, it is well to know that Yoo Yoo may be used as a synonym for G.O.K., and *vice versa*.

*Editorial from the National Society for Crippled Children and Adults.

BULLETIN BOARD

Preliminary Program
of the
ONE HUNDRED AND FIRST ANNUAL SESSION
The Medical Society
of the
State of North Carolina
May 2, 3, 4, 1955

PINEHURST, NORTH CAROLINA
Headquarters—Carolina Hotel

PROGRAM OF THE MEDICAL SOCIETY

SUNDAY, MAY 1, 1955

10:00 A.M.—Executive Council Meeting
(Small Card Room)

2:00 P.M.—Postgraduate Instructional Course and Audio-Visual Program (Especially arranged for those arriving early. This instruction accredited to postgraduate hours. Hotel check-in at noon.) (Large Card Room)

Special Registration of any members who cannot remain until Monday 9 A.M. By special arrangement the Section on the Practice of Medicine and Surgery and the Section on Radiology have made special presentations to offer a postgraduate instructional course in their respective programs which will be held on Tuesday afternoon and Wednesday afternoon. This arrangement has been in full cooperation with the Committee on Postgraduate Instruction and Audio-Visual Program.

Lenox D. Baker, M.D., Chairman, Committee on Postgraduate Instruction and Audio-Visual Program, Durham.

2 to 4 P.M.—Symposium on Trauma
An Instructional Course in Fractures
Everett I. Bugg, Jr., M.D., Chairman and Moderator, Durham
Emergency Treatment of the Paraplegic; Courtland Davis, M.D., Bowman Gray School of Medicine, Winston-Salem.
Emergency Diagnosis and Treatment of Fractures of the Spine; H. Robert Bradshear, M.D., University of North Carolina Medical School, Chapel Hill.
Emergency Treatment of Maxillo-Facial Injuries; Nicholas D. Georgiade, M.D., Duke University School of Medicine, Durham.

Emergency Treatment of Chest Injuries; H. Max Schiebel, M.D., Watts Hospital, Durham.

4 to 5 P.M. — Audio-Visual Program — J. Leonard Goldner, M.D., Chairman
George Miller, M.D., Moderator, Gastonia.

Kodachrome Slides Taken from a General Pediatric Practice
Thad Wester, M.D., Lumberton (15 minutes)

Poison Control in Children
(Kodachrome)
Jay Arena, M.D., Durham (15 minutes)
Pediatric Allergy (Kodachrome)
Susan C. Dees, M.D., Durham
(15 minutes)

8:00 P.M.—Memorial Service, Charles H. Pugh, M.D., Chairman, Presiding.
Solo Selections: Rex Hospital Student Nurse Choral Group, Raleigh
Frederick Stanley Smith, Director
An Address:
Signor L. Stealey, D.D., President
Southeastern Baptist Seminary, Wake Forest
(The Assembly Room)

MONDAY, MAY 2, 1955

9:00 A.M.—General Registration opens, Booth (Front Lobby) (Society Members, Delegates, Officials, Guests, Auxiliary Members, Technical and Scientific Exhibitors will register in this area.)

9:00 A.M.—NORTH CAROLINA BOARD OF MEDICAL EXAMINERS—Meets for business and hearings
(Small Card Room)

9:00 A.M.—Technical Exhibits open
(West porches).

9:00 A.M.—Postgraduate Instructional Course and Audio-Visual Program (continuation from May 1 above) (Large Card Room)

9 to 10 A.M. — Audio-Visual program — J. Leonard Goldner, M.D., Chairman, Durham
George Miller, M.D., Moderator, Gastonia
Examining the Well Child
Oklahoma State Dept. of Health
Oklahoma City, Kansas (Sound) (18 minutes)

Surgery of the Breast
Deryl Hart, M.D., Durham (Motion picture, sound) (30 minutes)

10 to 12 noon—Postgraduate Instructional Course in General Surgery—W. Walton Kitchin, M.D., Moderator and Chairman, Clinton

A Symposium on Gall Bladder Disease: Surgical Treatment of Acute Cholecystitis, William A. Farmer, M.D., Fayetteville

Jaundice With Indications for Surgical Intervention, John A. Brabson, M.D., Charlotte

Gall Bladder Disease in the Aging Patient, Felda Hightower, M.D., Bowman Gray School of Medicine, Winston-Salem

Gall Bladder Disease From a Medical Standpoint, Glenn C. Newman, M.D., Clinton

1:00 P.M.—Scientific Exhibits open (East porches)

1:30 P.M.—Postgraduate Instructional Course and Audio-Visual Program

1:30 to 3 P.M. — Audio-visual program — J. Leonard Goldner, M.D., Chairman
George Miller, M.D., Moderator, Gastonia

Nephrosis in Children
Robert E. Cook, M.D., Yale University School of Medicine (Motion picture, sound) (20 minutes)

- Anti-Biotics and Terramycin in Children (Pfizer) Motion picture (20 minutes)
All is not Polio that Paralyzes (Motion picture) (20 minutes)
Acyanotic Congenital Heart Disease (Motion picture, sound) (14 minutes)
Rushmer & Bandeau, University of Washington, Seattle, Washington
- 3:00 P.M.—Postgraduate Instructional Course in Problems of General Practice—Amos N. Johnson, M.D., Moderator and Chairman, Garland
- 3:00 to 4:00 P.M.—Panel Discussion on Problems Related to Obstetrics and Gynecology
- 4:00 to 5:00 P.M.—Panel Discussion on the Problems in the field of Pediatrics
- 2:00 P.M.—First Meeting THE HOUSE OF DELEGATES of the Medical Society — G. Westbrook Murphy, M.D., Speaker, presiding. (The Ball Room)
- 5:30 P.M.—Intermission, House of Delegates of the Medical Society
- 5:20 P.M.—Social Hour and Annual dinner of Medical Society for Technical and Scientific Exhibitors, Pinehurst Country Club, Pinehurst
- 5:30 P.M.—Social Hour, Medical College of Virginia Alumni Association. (The Pine Room)
- 5:30 P.M.—Scientific and Technical Exhibits close (under supervision of official watchmen throughout night)
- 6:00 P.M.—Dinner, Medical College of Virginia Alumni Association (Crystal Room)
- 8:15 P.M.—HOUSE OF DELEGATES of Medical Society reconvenes (The Ball Room)
-
- 5:00 P.M.—Medical Auxiliary Bingo Party (Large Card Room)

TUESDAY, MAY 3, 1955

BREAKFAST FOR OFFICERS OF STATE AND COUNTY SOCIETIES

- 7:30 A.M.—All county society officers and state society officials will assemble in Crystal Room (prior to opening of general dining room).
- 7:45 A.M.—Breakfast for Officers (Crystal Room) President Zack D. Owens, M.D., presiding
- 8:20 A.M.—Address: Progress in Medical Services —Thomas Hendricks, Secretary, Council on Medical Service of the American Medical Association, Chicago
- 8:50 A.M.—Announcements
- 8:55 A.M.—Adjournment

FIRST GENERAL SESSION

TUESDAY, MAY 3, 1955
(Ball Room)

- 9:10 A.M.—Call to Order, Millard D. Hill, M.D., Chairman, Committee on Arrangements
Invocation: Rev. Adam W. Craig, Episcopal Church, Pinehurst
Announcements: Secretary Hill
Recognition and presentation of President Zack D. Owens, Elizabeth City
- 9:15 A.M.—Recognition of distinguished guests

- 9:20 A.M.—Report of Committee on Scientific Awards: Roland T. Bellows, M.D., Chairman, Committee on Scientific Awards, Charlotte
J. O. Williams, M.D., Concord
William S. Doshier, M.D., Wilmington
Verne S. Caviness, M.D., Raleigh
- 9:40 A.M.—Recognition of Pulmonary Embolism—Hugh H. Hussey, M.D., Associate Professor of Medicine, Georgetown University, Washington
(From Section on Practice of Medicine and Surgery)
- 10:00 A.M.—Differential Diagnosis of Jaundice — David Cayer, M.D., Bowman Gray School of Medicine, Winston-Salem
(From Section on Practice of Medicine)
- 10:30 A.M.—Poliomyelitis—Control Measures—Hart E. Van Riper, M.D., Medical Director of the National Foundation for Infantile Paralysis
(From Section on Public Health)
- 11:00 A.M.—Address: The A.M.A. and Its Services and Responsibilities — Walter B. Martin, M.D., President A.M.A., Norfolk
- 11:30 A.M.—Median Neuritis: Corpal Tunnel Syndrome. Diagnosis and Treatment. J. Grafton Love, Chief of Neuro-Surgical Department, The Mayo Clinic, Rochester, Minnesota
- 12:00 to 12:10 P.M.—Announcements
Presentation of High School Essay
- 12:15 P.M.—Adjournment

ALUMNI LUNCHEONS

Tuesday, May 3, 1:00 P.M.

Duke University Medical School Alumni Luncheon.
T. L. Peele, M.D., Secretary, Box 3811, Duke Hospital, Durham. Complete luncheon fee \$3.00—Notify the Secretary for reservations. (Pine Needles)

The University of Pennsylvania Medical School Alumni Association Luncheon.
(The Crystal Room)

SECTION ON PRACTICE OF MEDICINE AND SURGERY

Tuesday, May 3, 2:30 P.M.
(Ball Room)

Ernest W. Furgurson, M.D., Chairman, Plymouth

A. PANEL:

Infections of the Heart — Diagnosis and Treatment

Moderator: Hugh H. Hussey, M.D., Associate Professor of Medicine, Georgetown University, Washington

1. John G. Smith, M.D., Internal Medicine, Park View Hospital, Rocky Mount, President of North Carolina Heart Association.
2. Glenn Sawyer, M.D., Assistant Professor of Medicine, The Bowman Gray School of Medicine, Winston-Salem.
3. Ernest Craig, M.D., Assistant Professor of Medicine in charge of cardiology, University of North Carolina School of Medicine, Chapel Hill.
4. Jerome S. Harris, M.D., Professor of Pediatrics, Chairman of the Department and Professor of Pediatric Cardiology, Duke Hospital, Durham. (Discussion will follow panel presentation)

- B. Recognition of Pulmonary Embolism
 Hugh H. Hussey, M.D., Professor of Medicine,
 Georgetown University
 (Before First General Session)

SECTION ON PRACTICE OF MEDICINE

Tuesday, May 3, 2:30 P.M.

(Large Card Room)

- Oscar L. McFayden, Jr., M.D., Chairman,
 Fayetteville
- Common Sense Management of Atopic Eczema
 Sherwood W. Barefoot, M.D., Greensboro
- The Management of Peptic Ulcer
 David Johnston, M.D., Duke Hospital, Durham
- Management of Congestive Heart Failure
 Frank Ward, M.D., Lumberton
- Neurological Differential Diagnosis of Conversion
 Hysteria—Robert Strobos, M.D., Bowman Gray
 School of Medicine, Winston-Salem
- Practical Aspects of Psychiatry—Richard C. Proctor,
 M.D., Bowman Gray School of Medicine, Winston-Salem
- Differential Diagnosis of Jaundice—David Cayer,
 M.D., Bowman Gray School of Medicine, Winston-Salem
 (Before First General Session)

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Tuesday, May 3, 2:30 P.M.

(Theater-in-the-Village)

- Alan Davidson, M.D., Chairman, New Bern
- Retrolental Fibroplasia with Clinical and Therapeutic
 Followup—C. H. Peebles, Jr., M.D., McPherson
 Hospital, Durham.
- Further Observations on the Use of Adrenosem Salicylate
 in the Control of Hemorrhage from the Nose and Throat—
 J. C. Peele, M.D., Kinston.
- Corneal Dystrophies in North Carolina—L. Byerly
 Holt, M.D., Winston-Salem; discussion by Frederick
 W. Stocker, M.D., McPherson Hospital, Durham.
- The Use of New Drugs in Ophthalmic Surgery—
 Frank C. Winter, M.D., University of North Carolina
 Medical School, Chapel Hill.
- Sinusitis in Children—John S. Gordon, M.D., The
 Nalle Clinic, Charlotte.
- A movie: "Cataract Extraction: Zonular Rupture by
 Conjunctival Traction" by E. E. Moore, M.D.,
 Asheville.
 (No presentation before General Sessions)

SECTION ON PEDIATRICS

Tuesday, May 3, 2:00 P.M.

(The Pine Room)

- Jean C. McAlister, M.D., Chairman, Greensboro
- The Diagnosis of Surgically Correctable Congenital
 Heart Malformations—Jerome S. Harris, M.D.,
 Duke University School of Medicine, Durham.
- Recent Trends in the Management of Tuberculosis
 in Children—William M. Peck, M.D., and Dirk
 Verhoeff, M.D., N. C. Sanatorium, McCain.
- Purpura Fulminans Complicating Chicken Pox—
 Case Report—Charles Stamey, M.D., Chapel Hill.
- A Practical Approach to the Problems of Erythroblastosis—
 T. E. Walker, M.D., Charlotte.
- The Use and Abuse of ACTH and Cortisone in Pediatric
 Practice—Conrad M. Riley, M.D., The Babies
 Hospital, Columbia-Presbyterian Medical Center,
 New York City.
 (No presentation before General Sessions.)

SECTION ON PUBLIC HEALTH AND EDUCATION

Tuesday, May 3, 2:30 P.M.

(Village Chapel)

- Malcolm T. Foster, M.D., Chairman, Fayetteville
- Obesity and Public Health—A. Hughes Bryan, M.D.,
 Professor of Public Health Nutrition, School of
 Public Health, University of North Carolina,
 Chapel Hill
- Diphtheria—A Continuing Health Problem in 1951
 —Jacob Koomen, M.D., Field of Epidemiology
 (USPHS), N. C. State Board of Health, Raleigh
- Leptospirosis—Its Public Health Significance—Walter
 C. Humbert, M.D., Health Officer, Pitt County
 North Carolina, Greenville
- Poliomyelitis—Control Measures — Hart E. Van
 Riper, M.D., Medical Director, National Foundation
 for Infantile Paralysis, New York
 (Before First General Session)

SECTION ON ANESTHESIA

Tuesday, May 3, 2:30 P.M.

(Dutch Room)

- Richard Spencer, M.D., Chairman, Greensboro
- Anesthesia for Minor Procedures—Richard E. Spencer,
 M.D., Greensboro
 Discussant, Daniel L. Crandall, M.D., Winston-Salem
- Preoperative Care and Premedication—Howard M.
 Ausherman, M.D., Durham
 Discussant, David A. Davis, M.D., Chapel Hill
- Further Problems of the Part-Time Anesthetist—
 Charles L. Beaver, M.D., Greensboro
 Discussant, V. W. Taylor, Jr., M.D., Elkin
- Postoperative Oxygen Therapy—Kenneth Sugioka,
 M.D., Chapel Hill
 Discussant, R. B. Wilson, M.D., Asheville
 (No presentation before General Sessions)

PRESIDENT'S DINNER

Tuesday, May 3, 1955

(Main Dining Room)

- 7:00 P.M.—Banquet
 Toastmaster, Robert A. Ross, M.D.,
 Chapel Hill
 Invocation: Rev. Allen P. Brantley, District
 Superintendent, N. C. Methodist
 Conference, Burlington
- 7:50 P.M.—Presentation of Guests
- 8:00 P.M.—Address:
 President Zack D. Owens, M.D.,
 Elizabeth City
- 8:20 P.M.—Presentation of President's Jewel
 John A. Payne, III, M.D., Sunbury
- 8:30 P.M.—Presentation of Karl B. Pace, M.D.,
 N. C. and A.M.A. General Practitioner
 of the year 1954-1955
 Recognition of Joseph J. Combs, M.D.,
 President-Elect, Federation of State
 Medical Examining Boards of the
 United States
- 8:40 P.M.—Address:
 Louis Krause, M.D.,
 Clinical Professor of Medicine, University
 of Maryland Medical College,
 Baltimore, Maryland
- 9:20 P.M.—Adjournment
- 10:00 P.M.—Floor Show Entertainment
- 11:20 P.M.
 to
- 2:00 A.M.—President's Ball

SECOND GENERAL SESSION

Wednesday, May 4, 1955

(Ball Room)

George W. Paschal, Jr., M.D., Vice President,
presiding

9:00 A.M.—Announcements

9:05 A.M.—Psychological Factors Related to Female Surgery—A. J. Silverman, M.D.,
Duke University Medical School, DurhamAuthors—A. J. Silverman, M.D.
Sanford I. Cohen, M.D.
Finn Magnussen, M.D.
W. Edward McGough(From Section on Neurology and
Psychiatry)9:25 A.M.—The Place of Surgery in the Treatment
of the Peptic Ulcer—Deryl Hart, M.D.,
Chief of Surgery, Duke University
Medical School, Durham
(From Section on Surgery)9:45 A.M.—Address: This is Your A.M.A.
George F. Lull, M.D., Secretary and
General Manager American Medical
Association, Chicago10:15 A.M.—Uses and Abuses of Blood Transfusions
—Robert W. Prichard, M.D., of the De-
partment of Pathology, Bowman Gray
School of Medicine, Winston-Salem
(From Section on Pathology)10:35—A.M.—Pruritus Vulvae—Roy Parker, M.D.,
Kinston-Durham
(From Section on Gynecology and
Obstetrics)10:55 A.M.—Report of the Implementation Commit-
tee for Region Three Health Services
M. M. Van Sandt, M.D., Regional Medi-
cal Officer, Federal Civil Defense Ad-
ministration, Thomasville, Ga.11:10 A.M.—Carcinoma of the Lungs
Otto C. Brantigan, M.D., Professor
Thoracic and Clinical Surgery,
University of Maryland Medical Col-
lege, Baltimore

CONJOINT SESSION

Wednesday, May 4, 1955

(Ball Room)

11:30 A.M.—G. Grady Dixon, M.D., President of
North Carolina State Board of Health,
will preside over this meeting of the
Medical Society of the State of North
Carolina and the State Board of Health

RECONVENING SECOND GENERAL SESSION

11:55 A.M.—Elections

12:00 noon—Award of Golf Prizes and Exhibit At-
tendance Prizes

12:15 P.M.—Adjournment

ALUMNI LUNCHEONS

Wednesday, May 4, 1:00 P.M.

The Jefferson Medical College Alumni Luncheon
(Crystal Room)SECOND MEETING OF THE
HOUSE OF DELEGATES

Wednesday, May 4, 2:30 P.M.

(Small Card Room)

(Agenda will be available)

SECTION ON SURGERY

Wednesday, May 4, 2:30 P.M.

(Ball Room)

R. W. Postlethwait, M.D., Chairman, Kinston

PANEL DISCUSSION

Subject: Complications of Peptic Ulcer

Moderator:

Felda Hightower, M.D., Winston-Salem

A. Perforation:

1. Obstruction

2. Malignant Change

George H. Wadsworth, M.D., Ahoskie

Hubert C. Patterson, M.D., Chapel Hill

B. Hemorrhage

William W. Shingleton, M.D., Durham

C. Intractability

Addison Brenizer, Jr., M.D., Charlotte

The Place of Surgery in the Treatment of the Peptic
Ulcer—Deryl Hart, M.D., Chief of Surgery, Duke
University Medical School and Hospital, Durham
(Before Second General Session)

SECTION ON OBSTETRICS AND GYNECOLOGY

Wednesday, May 4, 2:30 P.M.

(Large Card Room)

John R. Kernodle, M.D., Chairman, Burlington

Defibrinogenation with Placental Separation—Julian
Brantley, M.D., Rocky MountDiscussant: James F. Donnelly, M.D., Winston-
Salem-RaleighInterstitial Pregnancy—Robert V. Cross, M.D., High
Point

Discussant: Hugh McAllister, M.D., Lumberton

Management of Transverse Presentation — E. C.
Garber, M.D., Fayetteville

Discussant: Deborah Leary, M.D., Chapel Hill

Pruritus Vulvae—Roy Parker, M.D., Kinston-
Durham

(Before Second General Session)

SECTION ON NEUROLOGY AND PSYCHIATRY

Wednesday, May 4, 2:30 P.M.

(Pine Room)

David A. Young, M.D., Chairman, Raleigh

The Temporal Lobe

Robert Strobos, M.D., Winston-Salem

Discussant: E. C. Kunkle, M.D.

Factors Producing Ego Disintegration in the Aged—
Ewald W. Busse, M.D.

Authors—Ewald W. Busse, M.D.

Robert H. Barnes, M.D.

Louis D. Cohen, Ph.D. (by courtesy),
Durham

Discussant: Lloyd J. Thompson, M.D.

Results of Insulin Coma Therapy in a State Hos-
pital, 1949-1954—Robert Harper, M.D., Raleigh
Discussant: Thomas Wright, M.D.Unusual Cranial Deformities and Associated Anom-
alies in Mentally Defective Persons—

Julian Lokey, M.D., Kinston

Discussant: Lenox Baker, M.D.

Psychological Factors Related to Female Surgery—
A. J. Silverman, M.D., Duke University Medical
School, Durham

Authors—A. J. Silverman, M.D.

Sanford I. Cohen, M.D.

Finn Magnussen, M.D.

W. Edward McGough, B.S.

(Before Second General Session)

SECTION ON RADIOLOGY
Wednesday, May 4, 2:30 P.M.
(Village Chapel)

Ernest H. Wood, M.D., Chairman, Chapel Hill

Lumbar Intervertebral Disc Disease

Participants:

Thomas Farmer, M.D., School of Medicine, University of North Carolina, Chapel Hill—The Clinical Diagnosis of Herniated Lumbar Intervertebral Disc.

Ernest H. Wood, M.D., School of Medicine, University of North Carolina, Chapel Hill—Special Myelographic Techniques.

A. Price Heusner, M.D., School of Medicine, University of North Carolina, Chapel Hill—The Operative Treatment of Lumbar Disc Disease, Neurosurgically Considered.

R. B. Raney, M.D., School of Medicine, University of North Carolina, Chapel Hill—The Non-operative and Operative Treatment of Lumbar Disc Disease, Orthopaedically Considered.

Everett F. Hurteau, M.D., Akron, Ohio—Interbody Fusion.

Norman Boyer, M.D., Ecusta Paper Corporation, Pisgah Forest—Rehabilitation of Patients with Intervertebral Disc Disease.

(Intermission)

Cervical Intervertebral Disc Disease

Participants:

Thomas Farmer, M.D. — Clinical Diagnosis of Herniated Cervical Intervertebral Disc.

Ernest H. Wood—Myelographic Diagnosis of Cervical Disc Disease.

R. B. Raney, M.D.—Non-operative Treatment of Cervical Disc Disease.

A. Price Heusner, M.D.—Operative Treatment of Cervical Disc Disease.
(No presentation before General Sessions)

SECTION ON PATHOLOGY
Wednesday, May 4, 2:30 P.M.
(Theater)

Robert P. Morehead, M.D., Chairman,
Winston-Salem

The Correlation of Hepatic Function Tests with Needle Biopsies of the Liver—James P. Andrews, M.D., Durham

An Analysis of Bacterial Sensitivity to Certain Drugs as Determined in a Hospital Clinical Laboratory—Robert E. Perry, Jr., M.D., Durham

Cerebral Mucormycosis—A Case Report
Smith Foushee, M.D., Winston-Salem
Walter C. Beck, M.D., Winston-Salem

THIRD GENERAL SESSION
Wednesday, May 4, 1955
(Ball Room)

President Zack D. Owens, Elizabeth City, presiding

5:00 P.M.—Report of the House of Delegates

5:15 P.M.—Unfinished Business

5:20 P.M.—New Business

5:30 P.M.—Installation of President-Elect, James P. Rousseau, M.D., Winston-Salem, Administration of the authorized Oath of Office, Installation of vice presidents.

5:40 P.M.—Remarks by President and President-Elect

5:50 P.M.—Adjournment sine die

THIRTY-SECOND ANNUAL MEETING
OF THE
AUXILIARY TO THE MEDICAL
SOCIETY OF THE STATE OF
NORTH CAROLINA

PROGRAM — AUXILIARY

Sunday, May 1, 1955

8:00 P.M.—Memorial Service for departed Medical Society and Auxiliary members—Ball Room. Mrs. Charles T. Grier, Chairman, Auxiliary Memorial Committee.

Monday, May 2, 1955

9:00 A.M.

to

1:00 P.M.—Golf Tournament — Pinehurst Country Club—DOCTORS WIVES ONLY.
First Prize, Low Gross; Second Prize, Low Net. Mrs. Michael Pishko, Chairman.

10:30 A.M.—Finance Committee—Dutch Room

11:30 A.M.—Executive Committee—Dutch Room

2:30 P.M.—Executive Board Meeting—
Village Chapel

9:00 P.M.—Bingo Party—PINE ROOM. Valuable prizes. One dollar for the evening. Any money left after expenses will be used for our Sanatoria Bed Projects. MEN WELCOME! Mrs. George Heinitsh, Chairman.

Tuesday, May 3, 1955

9:00 A.M.—Annual Meeting of the House of Delegates (Open). County Presidents, Councilors, and Committee Chairmen are urged to attend.

10:45 A.M.—Intermission. Coca-Colas will be served. Mrs. L. H. Sanders, Chairman, Mrs. Robert Williams, Co-Chairman.

11:00 A.M.—General Meeting
Mrs. Clark Bailey, Harlan, Kentucky. Southern Regional Vice President of the Woman's Auxiliary to the American Medical Association is to be the speaker.

12:00 noon—Installation of Officers

12:15 P.M.—Adjournment

1:00 P.M.—Executive Board Luncheon—Pinehurst Country Club—Honoring distinguished guests of the Auxiliary. Mrs. G. M. Billings, Chairman.

3:00 P.M.—Fashion Show and Tea — Fashions by Kay's of Rockingham. Chairman, Fashion Show, Mrs. Ralph Garrison, Hamlet; Chairman, Tea, Mrs. J. S. Hiatt, Southern Pines.

7:00 P.M.—President's Dinner—Carolina Hotel Ball Room
10:00 P.M.—President's Ball

Wednesday, May 4, 1955

9:00 A.M.—Post-Convention Breakfast — Crystal Room, Carolina Hotel. Medical Auxiliary Board Members and County Presidents 1955 and 1956 urged to attend.
10:00 A.M.—Bridge Party—Large Card Room. Very worthwhile prizes; plan to attend. Mrs. William F. Hollister, Southern Pines, Chairman.

COMING MEETINGS

State and Regional

University of North Carolina School of Medicine. Postgraduate Medical Courses:

Statesville—March 29, April 5

Albemarle—March 30, April 5

Shelby—April 6, 20, 27, May 11, 18, 25

Chapel Hill—Diagnostic Methods and Aids, March 30, April 6; Clinical Seminars in Ophthalmology, the last Saturday in each month

Sixth Annual Nalle Clinic Foundation Lectures—Veterans Recreation Center, Charlotte, April 22

Celebration of the Seventy-fifth Anniversary of the Beginning of Medical Education at Chapel Hill—Chapel Hill, April 12-13

Medical Society of the State of North Carolina. Annual Meeting—Pinehurst, May 2, 3, 4

Duke Medical Alumni Luncheon — at the Pine Needles, Pinehurst, May 3, at 1:00 p.m.

North Carolina State Board of Medical Examiners—meeting to interview candidates for licensure by endorsement—Pinehurst, May 2

American College of Surgeons, Sectional Meeting—Nashville, Tennessee, April 4-6

Twenty-Eighth Annual Spring Congress of Ophthalmology and Otolaryngology—Gill Memorial Eye, Ear and Throat Hospital — Roanoke, Virginia — April 4-9

American College of Gastroenterology, Southern Region—Memphis, Tennessee, April 24

Postgraduate Course in Clinical Pathology and Pathology of Parasitic Diseases — Louisiana State University School of Medicine, New Orleans, August 15-27

National

Industrial Health Conference—Buffalo, New York, April 23-29

American College of Allergists, Eleventh Annual Congress and Graduate Instructional Course—Morrison Hotel, Chicago, April 25-30

American Medical Association, One Hundred and Fourth Annual Meeting—Atlantic City, June 6-10

Symposium on Tuberculosis and Other Chronic Pulmonary Disease—Saranac Lake, New York, July 11 to 15

NORTH CAROLINA STATE BOARD OF MEDICAL EXAMINERS

The North Carolina Board of Medical Examiners will meet at the Carolina Hotel, Pinehurst, Monday, May 2, at which time applicants for licensure by endorsement will be interviewed.

The written examination for medical licensure will be given at the Sir Walter Hotel, Raleigh, N. C., June 20-23. Applicants for licensure by endorsement will be interviewed on Tuesday, June 21.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Dr. J. Leonard Goldner of Duke University is one of five orthopedic surgeons who have just been honored by the American, British, and Canadian Orthopedic Association with Exchange Fellowships for study in Europe this spring. From April 20 to June 1 they will visit some 10 orthopedic centers in Great Britain and will attend the French-British Orthopedic meeting in Paris in early May.

Dr. Goldner, associate professor of orthopedic surgery, joined the Duke medical faculty in 1950, after serving as assistant resident and resident at Duke Hospital. A specialist in hand surgery, he formerly served on the staff of the Georgia Warm Springs Foundation, doing special work in surgery of poliomyelitis. He also served with the U.S. Navy Reserve Medical Corps.

* * *

Hundreds of persons are submitting to painful, destructive and useless "quack cancer cures" every year, Dr. Charles E. Horton, Duke University plastic surgeon, told the International College of Surgeons meeting in Washington, D. C., February 12.

Duke doctors have just completed a study of 64 such cases referred to Duke Hospital after treatment by quacks. A total of 27 of the 64 patients might have been saved earlier—and this was the real tragedy. But 10 others were mutilated for life, with loss of eyes, ears, noses, lips or with other gruesome scars. Fortunately, 26 of the patients recognized that the quack treatment wasn't helping them, and they sought medical advice. None of these patients now has any sign of the disease.

* * *

First prize in the 1954 Schering Award contest, a competition conducted among medical students at 83 medical colleges in the United States and Canada, has been awarded to Billy Franklin Andrews, a 22 year old second-year student at the Duke University School of Medicine.

The award of \$500, for his manuscript on the subject "Prophylactic and Therapeutic Uses of Parenteral Antihistamines," was formally presented at the University by Emanuel E. d Gomar, Jr., Schering's Division Manager in this area.

* * *

The Duke University Medical Town Hall featured a pathologist's work in better patient care during a television program on February 27.

Participants were Dr. Wiley D. Forbus, professor and chairman of Duke's Pathology Department, and Dr. George J. Baylin, radiologist and program moderator.

The adult and older men, who constitute today the most important reservoir of infection, are also the group least readily reached by screening programs and least able or most reluctant to abandon their ordinary occupations for the purpose of seeking segregation and treatment in sanatoriums and other tuberculosis hospitals.—Rene J. Dubos, Ph.D., Am. Rev. Tuberc., July, 1953.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Dr. Frank L. Horsfall, Jr., a member of the Rockefeller Institute for Medical Research in charge of a Department of Microbiology and distinguished investigator of viral infections, was a recent visitor at University of North Carolina Memorial Hospital. While here Dr. Horsfall participated in the Monday noon conference "Mechanisms and Control of Viral Multiplication."

* * *

Dr. Wilfred D. Abse, associate professor of psychiatry, and Dr. Thomas E. Curtis, instructor in psychiatry, recently attended a two-day conference on Reserpine in the Treatment of Neuropsychiatric, Neurological, and Related Clinical Problems sponsored by the New York Academy of Sciences. Section on Biology.

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Dr. Christopher C. Fordham, National Institute of Arthritis and Metabolic trainee in the Department of Medicine, was called into the Armed Service on February 15, and reported to Montgomery, Alabama, for Air Corps training.

* * *

Dr. Nelson K. Ordway attended the National Conference on Exchange of Persons in New York City on February 23-25, 1955. This conference was sponsored by the Institute of International Education.

* * *

Dr. George C. Ham, chairman of the Department of Psychiatry, has been asked by the American Board of Psychiatry and Neurology to serve as one of the examiners before whom candidates for certification will appear on February 28 and March 1 in New Orleans.

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Three panel discussions, the alumni dinner, and several other events are being planned for the celebration of the seventy-fifth anniversary of the beginning of Medical Education at Chapel Hill. The dates are April 12-13. Dr. W. P. Richardson heads the special committee completing plans for the event.

The program opens Tuesday evening with a panel on "The State University and Medical Care in the State," with Major L. P. McLendon, Greensboro, as moderator. The Wednesday morning panel will be moderated by Dr. Joseph Hinsey, Dean of the Cornell School of Medicine, on the general topic "Financing Medical Education." Wednesday afternoon, the panel topic will be "Humane Letters and Human Illness." The panelists will be a group of distinguished members of the liberal arts faculty of the University of North Carolina, with Dr. Everett W. Hall, of the Department of Philosophy, as moderator.

The alumni meeting will be held at dinner Wednesday evening, with the president, Dr. Fred C. Hubbard, in charge.

Invitations will be sent out later. It is hoped that all alumni will plan to attend, and bring with them others interested in the whole program of medical education, with special emphasis on the work at Chapel Hill. The panels cover such a range of subjects that public-minded citizens will find them interesting and instructive.

The complete program is as follows:

Tuesday, April 12

7:30 p.m.—Panel: The State University and Medical Care in the State
Major L. P. McLendon, Greensboro, N. C. ('12) Moderator

Dr. Osier Peterson, Chapel Hill, N. C.
Mr. Irving E. Carlyle, Winston-Salem, N. C.

Dr. John Truslow, Medical College of Virginia

Dr. W. M. Coppridge, Durham, N. C. ('16)

Dr. Walter B. Martin, President, American Medical Association

Wednesday, April 13

10:00 a.m.—Panel: Financing Medical Education
Dr. Joseph C. Hinsey, Cornell-New York Hospital, Medical Center, Moderator

Mr. J. Spencer Love, Greensboro, N. C.

Dr. Vernon W. Lippard, Yale University School of Medicine

Dr. James Watt, Director, National Heart Institute ('33)

Dr. M. R. Kinde, Director, W. K. Kellogg Foundation

Dr. John Truslow

12:30 p.m.—Buffet Luncheon, Morehead Building

2:30 p.m.—Panel: Humane Letters and Human Illness

Prof. Everett W. Hall, Philosophy, Moderator

Prof. B. L. Ullman, Classics

Prof. A. C. Howell, English ('24)

Dr. Nathan A. Womack, Surgery ('21)

Prof. U. T. Holmes, Romance-Philology

Prof. C. P. Lyons, English

Prof. S. E. Leavitt, Spanish

6:30 p.m.—Annual meeting and dinner, Medical Alumni Association, Lenoir Hall

Note: The three panels will be held in Hill Music Hall.

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The two following courses have been planned in cooperation with a committee of physicians from the local County Medical Society and are designed to present in a practical way a well balanced series of subjects of special concern to the general physician.

Statesville Postgraduate Medical Course

Tuesday, February 22

5:00 p.m.—Dysphagia

7:30 p.m.—Peptic Ulcer

Dr. John T. Sessions, Jr., Assistant Professor of Medicine, U.N.C. School of Medicine

Tuesday, March 1

5:00 p.m.—The Recognition of Congenital Heart Disease

7:30 p.m.—Recent Developments in Coronary Heart Disease

Dr. Ernest Craigie, Assistant Professor of Medicine, U.N.C. School of Medicine

Tuesday, March 15

5:00 p.m.—Pediatric Allergies

7:30 p.m.—Rheumatic Fever

Dr. Warren E. Wheeler, Professor of Pediatrics and Bacteriology, Ohio State University School of Medicine, Columbus, Ohio

Tuesday, March 22

5:00 p.m.—Fertility

7:30 p.m.—Bleeding of Pregnancy

Dr. Robert R. Ross, Professor and Chairman, Department of Obstetrics and Gynecology, U.N.C. School of Medicine

Tuesday, March 29

5:00 p.m.—Hypocalcemic Tetany

7:30 p.m.—A Medical Viewpoint on Thyroid Cancer

Dr. Philip K. Bondy, Assistant Professor of Medicine, Yale University School of Medicine, New Haven, Connecticut

Tuesday, April 5

5:00 p.m.—The Office Management of Diabetes

7:30 p.m.—Headaches

Dr. Perry S. MacNeal, Associate in Internal Medicine, Jefferson Medical College, Philadelphia, Pennsylvania

All meetings will be held at the Statesville Country Club. Dinner will be served at 6:30 p.m.

Albemarle Postgraduate Medical Program**Wednesday, February 23**

5:00 p.m.—Factors in Fetal Mortality

7:45 p.m.—Management of Toxemias of Pregnancy

Dr. Charles E. Flowers, Associate Professor of Obstetrics and Gynecology, University of North Carolina School of Medicine

Wednesday, March 2

5:00 p.m.—Recognition of Some Common Forms of Congenital Heart Disease

7:45 p.m.—Management of Some Cardiac Emergencies

Dr. Carl W. Gottschalk, Instructor in Medicine, University of North Carolina School of Medicine

Wednesday, March 16

5:00 p.m.—Pediatric Allergies

7:45 p.m.—Rheumatic Fever

Dr. Warren E. Wheeler, Professor of Pediatrics and Bacteriology, Ohio State University School of Medicine, Columbus, Ohio

Wednesday, March 23

5:00 and 7:45 p.m.—Low Back Pain

Dr. Beverly R. Raney, Professor of Orthopedic Surgery and Dr. A. Price Heusner, Professor of Neurological Surgery, University of North Carolina School of Medicine

Wednesday, March 30

5:00 p.m.—Hypocalcemic Tetany

7:45 p.m.—A Medical Viewpoint on Thyroid Cancer

Dr. Philip K. Bondy, Assistant Professor of Medicine, Yale University School of Medicine, New Haven, Connecticut

Wednesday, April 6

5:00 p.m.—The Office Management of Diabetes

7:45 p.m.—Headaches

Dr. Perry S. MacNeal, Associate in Internal Medicine, Jefferson Medical College, Philadelphia, Pennsylvania

All meetings will be held at Hotel Albemarle. Dinner will be served at 7:00 p.m.

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The U. S. Atomic Energy Commission has approved the support of joint research by Dr. C. D. Van Cleave and Dr. C. T. Kaylor of the Department of Anatomy with a contribution of \$10,500 annually for a three-year period. The grant will be used in a study of the double isotope effect of Ca^{45} and Sr^{90} on the pattern of distribution in the body, particularly in bone. Drs. Van Cleave and Kaylor completed this year a five-year study, under the same auspices, of the distribution, retention, and elimination of radioactive beryllium.

EDGECOMBE-NASH MEDICAL SOCIETY

The Edgcombe-Nash Medical Society held its regular monthly meeting in Rocky Mount on March 9.

Dr. J. H. Frierson, Jr., was in charge of the program, presenting Dr. Maurice Whittinghill of the Department of Zoology, University of North Carolina, as speaker. Dr. Whittinghill's subject was "An Arthritis Study in Nash County."

At the February meeting the society was host to the Fourth District Medical Society, and at that time heard a talk on "A Theory of Child Training" by Dr. Leslie B. Hohman of the Duke University School of Medicine. Members of the Medical Auxiliary were also guests of the society.

NEWS NOTES

Dr. Harry Winkler, Dr. Ira H. Rapp, and Dr. John A. Powers, diplomates of the American Board of Orthopaedic Surgery, associated for many years with the former Miller Orthopaedic Clinic, have announced their association and the opening of the Charlotte Orthopaedic Clinic at 1500 Elizabeth Avenue, Charlotte.

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Dr. William Hersey Davis, Jr., has opened his office at 720 West Fifth Street, Winston-Salem, for the practice of pediatrics.

SOUTH ATLANTIC ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

At a meeting of the South Atlantic Association of Obstetricians and Gynecologists held February 10 to 12 at Williamsburg, Virginia, the following officers were elected: president—Dr. Waverly R. Payne, Newport News, Virginia; vice president—Dr. Charles J. Collins, Orlando, Florida; president-elect—Dr. John C. Burwell, Jr., Greensboro; secretary-treasurer—Dr. C. Hampton Mauzy, Winston-Salem; assistant secretary-treasurer—Dr. W. Norman Thornton, Charlottesville, Virginia.

The next meeting of the Association will be held at the Hollywood Beach Hotel, Hollywood, Florida, January 28 through February 1, 1956.

NEWS NOTES OF THE AMERICAN MEDICAL ASSOCIATION**Meet Your Colleagues Along the Boardwalk!**

Physicians attending the A.M.A.'s 104th annual meeting, June 6-10, in Atlantic City may not have much time for casual strolling along the boardwalk, but they will find ample opportunity for catching up on the latest discoveries in medicine. A.M.A. has lined up nearly five full days of lectures, scientific and technical exhibits, and color television and motion picture presentations to give a good "short course" in postgraduate medical education.

Outstanding scientific features include: A report on the Salk polio vaccine trials at a joint meeting of the sections on pediatrics and preventive medicine; a general discussion of resuscitation of the newborn for the sections on anesthesiology, diseases of the chest, general practice, obstetrics and pediatrics; exhibit-symposiums on rheumatism and diabetes; fracture and fresh pathology exhibits, and a new "Queries and Minor Notes" feature in which consultants from all branches of medicine will be on hand in convention hall to answer physicians' questions concerning specific cases. In addition, the Air Force will demonstrate its "flying infirmary" on the beach in front of the Auditorium throughout the week.

More than 325 scientific exhibits and 350 technical exhibits will be on display. The color television program will present interesting surgical and clinical demonstrations piped directly into the Auditorium from Philadelphia hospitals.

Special note to all physicians. The Auditorium will be open exclusively for physicians from 8:30 a.m. to 12 noon on Wednesday to allow time for moving more freely among the exhibits and questioning exhibitors.

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Accommodations Still Available for European Tours

Accommodations are still available for the four-week air tours of Europe which are planned to precede and follow the annual meeting at Atlantic City, June 6-10. Four tours are offered which include a

comprehensive itinerary of capital cities and renowned points of interest combined with medical lectures by eminent European medical authorities.

Tour-goers will visit such storied places as Windsor Castle, Westminster Abbey, the Colosseum and Pantheon, Napoleon's Tomb, the Palace of Versailles, the Louvre, will glide through Venice on gondolas and travel down the Rhine on a German steamer. Cities to be visited will include London, Amsterdam, The Hague, Coblenz, Frankfurt, Zurich, Lucerne, Milan, Venice, Florence, Rome, Genoa, Monte Carlo, Nice, and Paris.

Departures from New York are scheduled for May 6, May 8, June 11, and June 13. The cost of the tour is only \$1,598. This covers round-trip transportation and all meals and hotel accommodations en route. The tours have been arranged by United Air Lines and Thos. Cook & Sons under the sponsorship of the A.M.A.

Requests for booking or additional information should be addressed to American Medical Association, Pre-and Post-Convention Tours, 5959 South Cicero Avenue, Chicago 38, Ill. A deposit of \$100 is required at time of booking. Checks should be made out to United Air Lines for both the deposit and final payment, which is due April 8.

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New Booklet on Union Health Centers

Just off the presses is the revised edition of the "Union Health Centers" booklet, which describes 17 union-sponsored health centers located in 12 cities and eight states. The 48-page pamphlet was prepared by the Committee on Medical Care for Industrial Workers—a joint committee of the Councils on Medical Service and Industrial Health. Copies are available on request from the Council on Medical Service.

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A.M.A. Offers New TV "Line" for 1955

Moving rapidly along the television assembly line in A.M.A.'s Bureau of Health Education are some 25 programs earmarked for local communities. Production schedule calls for completion of work by June 1. The Bureau plans to distribute its "products" to medical societies for airing over local TV stations. The catalogue listing includes:

(1) "What to Do" series, six new five-minute films, feature Abby Lewis, well known Broadway and TV actress, and Dr. W. W. Bauer, Bureau director. Subjects—backache, hay fever, eye injury, skin problems, baseball finger, and dizziness. (2) Script clips include six complete films and accompanying scripts to be narrated by a local doctor. Subjects—normal eyesight and common defects; exercise and your heart; industrial accidents; the nervous system; polio, and prevention of crippling in arthritis. (3) Rural health scripts (prepared in cooperation with the Council on Rural Health) consist of 13 scripts to be used in live participation shows by doctors, veterinarians, county agents, 4-H personnel and agricultural leaders. Subjects—rabies; brucellosis; home pasteurization of milk; pure water supply from farm wells; balanced diet; septic tanks; the place of minerals and vitamins in diet; food, growth and medical care; weight control; health examinations; family or personal physician; accidents in the home, and your health insurance policy.

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New Guides to Better TV Shows

The ABCs of television programming are neatly spelled out in two attractive new handbooks recently prepared by A.M.A.'s Bureau of Health Education in cooperation with the Council on Medical Education and Hospitals. The two booklets together cover the field of television as it pertains to both health and medical education opportunities. The first, "TV in Health Education," includes tips for medical soci-

eties on choosing a program format, preparing scripts, planning production details and making films. The second, "TV in Medical Education," was designed primarily for the physician-participant, and discusses the fundamentals of television, and the production of a medical program.

Single copies of both booklets are available free on request from the Bureau, and prices for quantities will be given.

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A.M.A. to Publish '55 Edition of Health Insurance Brochure

Current information on insurance benefits, enrollments, and other pertinent data is being gathered by A.M.A.'s Council on Medical Service for the 1955 edition of its Health Insurance Brochure. Questionnaires have been circulated by the Council's Committee on Prepayment Medical and Hospital Service to various insurance plans. This ninth edition should be available for distribution early in the summer.

Although the Council has discontinued its seal of acceptance program for health insurance benefit plans, this in no way minimizes its interest in the broad aspects of the insurance field. In approving the discontinuance of the seal program, the House of Delegates has made it clear that all other activities will be continued and intensified.

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Film Added to TV Library

"Night Call," a film originally produced for the "Calvalcade of America" television program, has been added to the film library of the Committee on Medical Motion Pictures. Recording a dramatic 24 hours in the life of a doctor, this 26-minute film may be secured from the Committee.

AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGERY

Announcement of the 1955 scholarship contest has been made by the American Society of Plastic and Reconstructive Surgery. The junior classification is limited to residents in training and plastic surgeons who have been in practice not more than five years. Contestants in the senior classification must have been engaged in the practice of plastic and reconstructive surgery for more than five years.

Manuscripts will not be accepted after July 1. These should be sent by registered mail.

The winning essays must be presented in person on the Foundation's program at the annual meeting of the American Society of Plastic and Reconstructive Surgery, Inc. at Atlantic City, September 25-30.

The award winners shall present a written report before their National Plastic Surgery Societies, on their scholarship experiences. This report should be published in their respective surgical journals.

The Foundation of the A.S.P.R.S. reserves the right to publish the winning essays in the official journal, *Plastic and Reconstructive Surgery*.

For further information write to the Award Committee, c/o The Foundation of the American Society of Plastic and Reconstructive Surgery, Inc., 30 Central Park South, New York 19, New York.

AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGERY, INC.

Two new annual cash prizes totaling \$1,750,000 for winners of the scholarship contest sponsored by the Foundation of the American Society of Plastic and Reconstructive Surgery, Inc., have been announced by Dr. Jacques W. Maliniac, of New York, chairman of the Board of Trustees.

The prizes—\$1,000.00 to the first award winner and \$750.00 to the second (for American citizens

only)—are in addition to the three months' scholarships with full maintenance provided in renowned plastic surgery centers listed in the Foundation's pool. Foreign award holders receive \$200.00 for local travel expenses in addition to full maintenance in the Services.

Scholars are chosen from essayists in the Foundation's annual contest. A distinctive feature of this program is that the arrangements between the plastic surgical services, here and abroad, are made on a reciprocal basis.

The first and second prize winners of the 1954 contest, Dr. Charles Horton of Duke University and Dr. A. M. Struthers of Mayo Clinic, presented their papers at the Society's annual meeting at Hollywood, Florida, October 24-29. They will soon depart on an extensive trip to important plastic surgery centers in the United States and Europe. Funds for the awards were provided by the Foundation.

LOUISIANA STATE UNIVERSITY SCHOOL OF MEDICINE

Postgraduate Course in the Clinical Pathology and Pathology of Parasitic Diseases

A short intensive course on the laboratory diagnosis and pathology of parasitic infections will be presented August 15-27, 1955 at the Louisiana State University School of Medicine in New Orleans.

The course is designed primarily for pathologists and technologists. However, general practitioners, internists, pediatricians, gastroenterologists and physicians engaged in the practice of public health and tropical medicine who are interested in the laboratory diagnosis of parasitic infections are welcome to attend.

Registrants should bring their microscopes, equipped with mechanical stages, and their microscope lamps. A limited number of places will be available. The fee for the course is \$50.00.

Persons interested in attending this course may write to:

Dr. Clyde Swartzwelder
Department of Microbiology
Louisiana State University School of Medicine
1542 Tulane Avenue
New Orleans 12, Louisiana

REGIONAL MEETING OF THE AMERICAN COLLEGE OF GASTROENTEROLOGY

A regional meeting of the Southern Region of the American College of Gastroenterology will be held in Memphis, Tennessee, on April 24. The Scientific Session will be held in The Skyway, at the Hotel Peabody, commencing at 2:00 p.m., and following the semi-annual meeting of the Board of Trustees of the College.

Participating in the program of the Scientific Session will be Drs. E. G. Campbell, Memphis, Tennessee; Jerome S. Levy, Little Rock, Arkansas; Edward A. Marshall, Cleveland, Ohio; John M. McMahon, Bessemer, Alabama; James T. Nix, New Orleans, Louisiana; E. L. Posey, Jr., Jackson, Mississippi; N. E. Rossett, Memphis, Tennessee; Henry G. Rudner, Sr., Memphis; L. C. Sanders, Memphis; S. L. Stephenson, Jr., Jackson, Mississippi; I. Frank Tullis, Memphis.

Dr. Lynn A. Ferguson, Grand Rapids, Michigan, president of the American College of Gastroenterology, will preside. The program for the regional meeting is under the chairmanship of Dr. John E. Cox, and Dr. E. G. Campbell, both of Memphis.

The Southern region consists of the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisi-

ana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

Members of the medical profession are cordially invited to attend. A copy of the program may be obtained from the Secretary, American College of Gastroenterology, 33 West 60th Street, New York 23, New York.

INDUSTRIAL HEALTH CONFERENCE

Prominent industrial physicians, hygienists, nurses and dentists from all over the country will gather to discuss the progress of industrial health when the 1955 Industrial Health Conference meets at the Memorial Auditorium in Buffalo, New York, April 23 to 29.

Some 2,000 members of the participating five organizations, the American Association of Industrial Dentists, American Association of Industrial Nurses, American Conference of Governmental Industrial Hygienists, the American Industrial Hygiene Association, and the Industrial Medical Association, as well as representatives of industrial management, labor, and others concerned with health in industry, are expected to attend the Conference.

THE AMERICAN COLLEGE OF ALLERGISTS

Allergists Hold Annual Meeting

The Eleventh Annual Congress and Graduate Instructional Course in Allergy of the American College of Allergists will be held at the Morrison Hotel in Chicago, Illinois, April 25-30. The first three days will be devoted to 40 hours of intensive teaching of the basic facts in this field of medicine. These courses will be conducted by 45 specialists well known for their teaching ability and mostly chosen from the medical college faculties throughout the nation.

The last two days will be devoted to more advanced clinical papers and to reports of research and investigations. The Annual Oration of the College will be given this year by Robert A. Cooke, M.D., director of The Institute of Allergy at The Roosevelt Hospital, New York City, and one of the great pioneers in the field. His subject will be: "Medical Research in the Field of Allergy."

Any member in good standing of his local county medical society is cordially invited to attend. Further details and the program may be obtained by writing American College of Allergists, La Salle Medical Building, Minneapolis 2, Minnesota.

THE AMERICAN INSTITUTE OF DENTAL MEDICINE

The next annual meeting of the American Institute of Dental Medicine will take place at the Desert Inn, Palm Springs, California, October 23 to 27, 1955.

All Seminar lecturers will participate in a round table forum discussing the application of their subject to the practice of Dental Medicine. Applications and full information may be secured from the Executive Secretary, Miss Marion G. Lewis, 2240 Channing Way, Berkeley 4, California.

SYMPOSIUM FOR GENERAL PRACTITIONERS

The fourth annual Symposium for General Practitioners on Tuberculosis and Other Chronic Pulmonary Disease will be held in Saranac Lake, New York from July 11 to 15. It is approved for 26 hours of formal credit for members of American Academy of General Practice.

The registration fee for the Symposium is \$40.00. Further information and copies of the program can be obtained by writing Dr. Richard P. Bellaire, General Chairman, Symposium for General Practitioners, P. O. Box 2, Saranac Lake, New York.

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

The Public Health Service is now receiving applications for its seventh one-year medical record library science training program at the U. S. Public Health Service Hospital, Baltimore, Maryland. A new class of 10 students begins in September. For consideration, applications must be received in Washington by June 1, 1955.

Approved by the American Medical Association, the Public Health Service medical record library science course consists of 50 weeks of instruction and practice in medical record theory, procedures, and management.

Further information and application forms may be obtained by addressing: Chief, Medical Record Branch, Division of Hospitals, U. S. Department of Health, Education, and Welfare, Washington 25, D. C.

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"Stop Rheumatic Fever," a new motion picture for the public, showing how this disease can be prevented by treatment of "strep" infections, is being released for nationwide use, Surgeon General Leonard A. Scheele of the Public Health Service, U. S. Department of Health, Education, and Welfare, has announced. The animated film will be used as part of the "Stop Rheumatic Fever" campaign now being conducted by the National Heart Institute, Public Health Service, and the American Heart Association and its affiliates.

Information on the film may be obtained from the Heart Information Center, National Heart Institute, Public Health Service, Bethesda 14, Maryland, or from the American Heart Association, 44 E. 23d Street, New York 10, New York.

DEPARTMENT OF THE ARMY

The Armed Forces Epidemiological Board held an organizational meeting for its newly planned Commission on Cutaneous (skin) Diseases in Philadelphia, Pennsylvania, February 17 and 18. The meeting was attended by representatives of the Army, Navy, and Air Force Medical Departments, and the U. S. Public Health Service.

Dr. Donald M. Pillsbury, of the Department of Dermatology and Syphilology, University of Pennsylvania, and consultant to the Army Surgeon General, has been designated by the Board as director of the new Commission.

U. S. ATOMIC ENERGY COMMISSION

Preliminary plans for participation by the United States in the International Conference on the Peaceful Uses of Atomic Energy at Geneva, Switzerland, August 8-20, 1955, were announced recently.

The United States Government has accepted the invitation to participate in the Conference, which was extended by the United Nations to 84 nations, including 10 from the Soviet bloc. Enclosed with the invitations were several documents, including the Topical Agenda for the Conference and the Conference Rules of Procedure.

President Eisenhower's proposal for a world-wide conference to promote the dissemination of new information on peaceful uses of atomic energy was first announced by Chairman Lewis L. Strauss of the United States Atomic Energy Commission on April 19, 1954. It will be held under the auspices of the United Nations, which authorized the meeting by formal resolution of the United Nations General Assembly on December 4, 1954.

The Conference is an outgrowth of the atom-for-peace proposals laid before the United Nations on December 8, 1953 by President Eisenhower when he urged that the atomic resources of the world be mobilized to apply the benefits of atomic energy to the cause of peace.

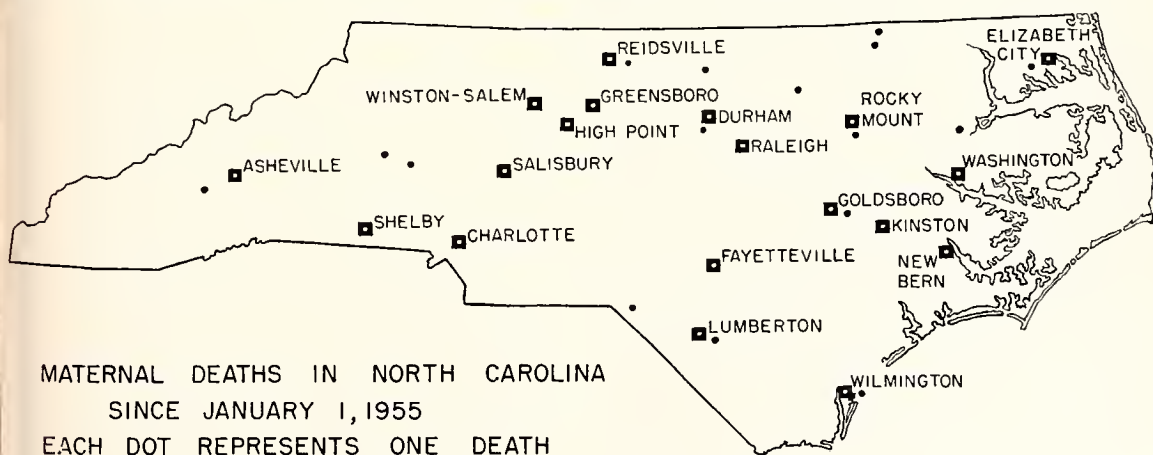
VETERANS ADMINISTRATION

Dr. William W. Fellows, manager of the Veterans Administration research hospital in Chicago, has been appointed assistant chief medical director for planning in Central Office, Washington, D. C. Dr. Fellows will succeed Dr. Kelso A. Carroll, who has been appointed as manager of the VA center in Bay Pines, Florida.

In his Washington assignment, Dr. Fellows will direct the planning of the medical care program of the VA under the chief medical director for VA's 172 hospitals, 104 outpatient clinics, and 17 domiciliarys.

UNITED STATES AIR FORCE

According to an announcement by Brigadier General Otis O. Benson, Jr., USAF (MC), President of the Aero Medical Association, Colonel Robert J. Benford, USAF (MC) will take over the editorship of that organization's official publication the *Journal of Aviation Medicine*. He will succeed Dr. Louis H. Bauer, first commandant of the U. S. Air Force School of Aviation Medicine and founder of the Aero Medical Association.



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BOOK REVIEWS

Healthier Living. By Justus J. Schifferes.
928 pages. Price, \$6.75. New York: John
Wiley and Sons, 1955.

This book, a publication of the National Health Council, is a panoramic study of personal and community health, with the emphasis on health, not disease. For his foundation, the author has drawn on all the disciplines that afford a clearer picture of normal human development—history, literature, anthropology, sociology, psychiatry, psychology, child development, and many others. These, together with the author's close concern and working familiarity with health as a dynamic step towards mature living, have gone into the intensive preparation of this book.

"Healthier Living" is arranged according to the four specific areas in which health factors are essential—family living, and mental, personal, and community well-being. Out of these broader units emerge the details on heredity, growth, marriage, religion, emotional patterns, food and nutrition, body care, and a positive approach towards the understanding and eradication of disease. Physicians, educators, administrators, and the voluminous reports of health, religious, and cultural groups were consulted for this investigation into questions of health and hygiene.

Dr. Schifferes has been on the editorial staffs and has contributed to a wide variety of scientific and general periodicals.

* * *

Needed Research in Health and Medical Care: A Bio-Social Approach. By Cecil G. Sheps and Eugene H. Taylor. 215 pages. Price, \$5.00. Chapel Hill: The University of North Carolina Press, 1954.

Dr. Sheps and Dr. Taylor have attempted to summarize the work of the seminar on this subject, held in Chapel Hill in September 1952. This report takes up the purpose of bio-social research, the fields in which it is useful, and the problems to be anticipated in methodology and organization.

The book is of interest to those who are aware that further understanding of disease needs more than the specifist approach to causation. It also fulfills its purpose in pointing out the necessity for evaluating pre-disease states, the actual effects of many suspected influences, and many other notions which have been accepted without proof. It is unfortunate, however, that the language of the report includes so many words, the common usage of which makes the usual connotation difficult to ignore. Until new expressions are coined to take the place of "social physiologist," "social epidemiologist," and, in particular, "epidemiology," such reports will continue to be vague and confusing and will not engender enthusiasm on the part of the physician dealing with these forces every day.

* * *

Primer of Allergy. By Warren T. Vaughan, M.S., M.D. Ed. 4. Revised by J. Harvey Black, M.D. Illustrated by John P. Tillerv. 191 pages. Price, \$4.25. St. Louis: The C. V. Mosby Company, 1954.

This little book, first published by Dr. Warren T. Vaughan, proved to be both popular and instructive to laymen and physicians alike. It is probably the most used of any book written by physicians interested in allergy, and its contents are presented in such an understandable way that allergic individuals also derive great benefit from it.

After Dr. Vaughan's death, Dr. J. Harvey Black, who is also gifted in writing, has continued to edit and add to the work as progress is made in allergy. The fact that a fourth edition has just been published shows that there is a great demand for the book.

The more a patient knows of his allergic condition, the cause, the treatment, and the help to be expected, the more interested he will be and the better patient he will become. The desired explanations are given and modern methods are outlined in a clear, concise way. An allergic individual or a doctor interested in allergy can ill afford to do without the fourth edition of this useful book.

The Month in Washington

A bill that is not a part of the official Eisenhower health program is causing a stir in Congress.

The bi-partisan measure would provide \$90 million dollars to be spent over three years to help construct and equip nonfederal medical research and laboratory facilities. Often in the past five years efforts have been made to get Congress to set up various huge new research programs pointed at one disease and calling for direct federal operation of the project. Without exception they have been turned down, Congress deciding that the existing National Institutes of Health are the proper vehicles for such all-federal research.

The bill that Congress now is interested in takes a different approach. It would have the federal government "get in and get out," a system used successfully in the Hill-Burton hospital construction program. Grants would go to nonprofit hospitals, medical schools, medical laboratories and like institutions, and the institution itself would have to match the federal money. Once the particular construction had been completed and equipped, the federal government would relinquish all control or influence over the project, as under the Hill-Burton Act. Unlike the Hill-Burton plan, the grants would go directly from the federal government to the project.

The Senate sponsors of this bill carry more than ordinary weight within their own parties. They are Senator Lister C. Hill (D., Ala.), who not only is chairman of the Labor and Public Welfare Committee, but also heads the subcommittee that passes on most health appropriations, and Senator Styles Bridges (R., N. H.). The latter had added

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J. Pediat. 44:326, 1954.

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Brit. M. J. 2:755, 1953.

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J. Pediat. 35:419, 1954.

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prestige as chairman of the Senate Republican Policy Committee. The House sponsor is Representative Percy Priest (D., Tenn.), chairman of the Interstate and Foreign Commerce Committee, which like Senator Hill's committee is in charge of most health bills.

Introduction of specific bills to implement the President's own health program disclosed a few more details of what he wants from Congress, but generally the suggestions are the same as those that Mr. Eisenhower offered in his State of the Union Message, his Health Message, and other earlier statements.

The reinsurance bill, again the center of controversy, is much the same as last year's bill, but singles out certain areas where the administration believes reinsurance would be particularly helpful. They are the coverage of rural families, greater protection for low-income families (including home and office calls), and the insurance of major medical costs. The new bill also makes some technical changes designed to assure that the federal government does not intend to regulate the insurance industry.

The bill for federal guarantee of private mortgages on health facilities follows the general lines of last year's Kaiser-Wolverton plan, but makes some concessions. For example, the new bill drops the requirement that a facility has to devote most of its services to prepayment plan patients.

As introduced, the Defense Department's bill for more medical care for military dependents had no surprises at all. It is exactly the same bill that was offered last year. Efforts had been made to write in some compromises, but these were given up for the time being. The major question, as it has been from the start, is whether most dependents are to get their medical care from an insurance plan such as is proposed for other U.S. employees and their dependents, or are to be cared for by uniformed physicians in military hospitals.

Other parts of the President's program, now up for action in Congress, propose more money for the medical care of public assistance recipients, grants to states for training practical nurses and for more advanced nurse training, and more research and training in mental health.

A surprise Eisenhower request is that this country lift its statutory restriction on the

amount of money U.S. may contribute toward the World Health Organization. Under present law the U.S. may not pay more than \$3 million annually. The administration wants this ceiling lifted to \$5 million.

Congress currently is deciding how much money to allow for health programs for the next fiscal year, starting July 1. Although the administration requested for Mrs. Hobby's department only about what it is spending this year (\$2 billion), the budget for Public Health Service was upped about \$77 million. Most of the research institutes are scheduled for substantial increases.

In Memoriam

JOHN B. CRANMER, M.D.

We the members of New Hanover Medical Society have been saddened by the passing of our colleague, Dr. John B. Cranmer. Dr. Cranmer was born in Southport, North Carolina, February 1, 1874, and after moving to Wilmington studied pharmacy. After practicing pharmacy for a few years, he studied medicine and engaged in general practice, in which he continued for forty-nine years. During this period he gave generously of his time and talents in furthering the advance of medical knowledge and progress in this community, and was one of those almost extinct lovable "family doctors."

He has served on the boards of the Caswell Training School in Kinston and the State Hospital at Goldsboro, and as a past president of the New Hanover County Society. He was a member of the State Society and the American Medical Association.

Dr. Cranmer was very active in religious circles, and was a vestryman in St. James Episcopal Church.

Now therefore, Be it Resolved that in the death of Dr. Cranmer we have lost one of our beloved fellow practitioners and that we extend to his widow our heartfelt sympathy, and

Be it further resolved that a copy of these resolutions be spread upon our minutes and that a copy be sent to Mrs. Cranmer, and a copy to the press.

Herbert A. Codington, M.D.

Robert B. Rodman, M.D.

New Hanover County Society
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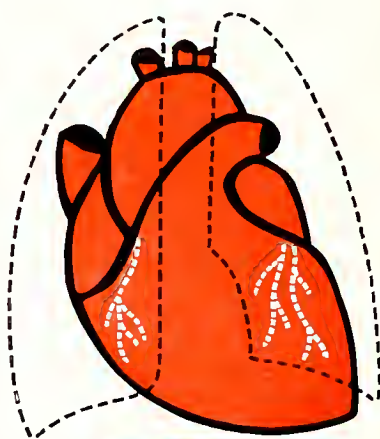
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SYMPOSIUM ON OBSTETRICS

RUPTURE OF THE PREGNANT UTERUS WITH PRESENTATION OF SEVEN PATIENTS

S. L. PARKER, M.D.*

R. T. PARKER, M.D.*

and

F. H. FULLER, M.D.*

KINSTON

At 2:45 A.M. on June 4, 1953 Mrs. D. W. G. was awakened with severe pain in the left lower quadrant of the abdomen and back. The patient had a post-cesarean uterus, and was being observed in our hospital for mild irregular contractions in the thirty-second week of pregnancy. One of the authors was called at 3 A.M. and given the findings. In anticipation of the possibility of a rupture of the uterus, the operating room nurses were alerted immediately and the laboratory technician recalled to release the already cross-matched blood. Examination revealed the blood pressure to be 120 systolic, 80 diastolic, the pulse 84, respirations 20. The patient's color was good, but she was quite apprehensive. The uterus was extremely tense and board-like, with a soft tender area in the left lower segment. The fetal heart sound was audible. There was a small amount of vaginal bleeding. On rectal examination the cervix was found to be dilated 1 cm., with the presenting part high and not fixed. The impression was ruptured uterus and possible partial separation of the placenta. The administration of whole blood was started immediately. Within one hour after the onset of symptoms the abdomen was opened under cyclopropane anesthesia. A small amount of free blood was found in the abdominal cavity. The old classic cesar-

ean section scar was intact. The rupture was located in the lateral surface of the uterus medial to the insertion of the round ligament and tube, and was filled with placental tissue. A classic incision was made, and a 3 pound, 15 ounce premature living male infant was delivered in good condition. A total hysterectomy was then performed. The patient received 1,500 cc. of whole blood during the procedure, withstood the operation well, and made an uneventful recovery. The baby did well. Another baby and mother had been saved despite a ruptured uterus. The immediate diagnosis, the rapid replacement of blood, and the prompt operation marking this case are the heroic steps necessary to save a baby and a mother with an early rupture of the pregnant uterus. The high incidence of this complication encountered in our practice during the past four years and the surprising salvage rate obtained have prompted this paper.

Incidence

At Lenoir Memorial Hospital in the four year period 1950-1953, there were 3,212 deliveries. During the same period 49 cesarean sections were performed, making an incidence of 1.5 per cent. There were 28 (58 per cent) primary and 21 (43 per cent) repeat cesarean sections. There was a total of 34 previous cesarean section patients among the 3,221 deliveries. Thirteen previously sectioned patients were delivered vaginally—an incidence of 38 per cent. Cosgrove⁽¹⁾, reporting on the obstetric future of patients having cesarean sections, gives the following percentages of vaginal deliveries after cesarean section: Jefferson 16 per cent, Margaret Hagus 35.8 per cent, Lewis Memorial 32.6 per cent, and New York Lying In 38.7 per cent.

During the same period in our hospital, there were 7 ruptured pregnant uteri, for an incidence of 1 to 460 deliveries. This figure

Presented before the Society of Obstetrics and Gynecology, Mid Pines, North Carolina, May 2, 1954.

*From the Department of Obstetrics and Gynecology, Lenoir Memorial Hospital, Kinston, North Carolina.

Table 1
Incidence of Cesarean Sections and Ruptured Uteri

Year	CESAREAN SECTIONS			VAGINAL DELIVERIES			
	Deliveries	Primary	Repeat	Total (Per Cent)	Total No. Previous Sections	After Section	Ruptured Uterus
1950	632	8	4	1.9	7	3	1
1951	772	7	6	1.7	8	12	1
1952	879	8	2	1.1	5	3	1
1953	938	5	9	1.5	14	5	4
	3221	28	21	1.55	34	13	7
		49					

*Three of the seven ruptured uteri occurred in post-cesarean patients.

is even more startling when we consider that in 1953 alone there were 4 ruptured uteri in 938 deliveries, for an incidence of 1 to 235 deliveries. Table 2 shows comparable data collected by Brierton⁽²⁾, Ingram⁽³⁾, Beacham⁽⁴⁾, and Donnelly⁽⁵⁾.

Our incidence of ruptured uteri is high when other statistics are compared. The only explanation is that the short interval of time involved and the small number of total deliveries cause the statistics to appear misleading. Two of the 7 patients were referred after the rupture had taken place.

Clinical Data

Examination of our clinical material reveals that all 7 of the patients were multiparous, as is usually the case. There were 5 spontaneous ruptures. Three of these occurred in previously sectioned patients, 1 at 32 weeks, 1 at 36 weeks, and 1 at 40 weeks. Another occurred in a precipitous labor culminating in spontaneous delivery, and the other took place in a patient referred from another hospital after the uterus had obviously ruptured two days previously. There were 2 manipulative ruptures. One followed a breech extraction of a hydrocephalic infant, with laceration of the cervix and lower segment. The other followed a breech extraction

of a premature infant through an old lacerated and incompetent os. One rupture occurred before admission and 6 after admission. The site of rupture was the lower segment in 3 patients and the upper segment in 4.

There was no delay in diagnosis in 4 patients and definite delay in 3. The infants of the 4 patients with immediate diagnosis survived, while those of the patients with a delayed diagnosis died. There was no maternal death. Three of the infants did not survive, for a 43 per cent infant mortality, and the 3 infants that died included a hydrocephalic stillborn, giving a corrected infant mortality of 29 per cent. If the patient whose baby died prior to admission from another hospital was deleted from the statistics, the infant mortality related to our direct management would be only 14.3 per cent.

The Importance of Early Recognition and Treatment

The seriousness of this obstetric accident is emphasized by Eastman⁽⁶⁾, who stated that rupture of the uterus is responsible for at least 5 per cent of maternal deaths, and Beacham⁽⁴⁾, who concluded that each year more than 200 women in the United States lost their lives because of this complication. All recent authors recognize the importance of early diagnosis and active treatment. In 1952, Ingram, Alter and Carter⁽³⁾, in an enlightening study of occult rupture of the pregnant uterus, pointed out that the diagnosis is often obscure, and early recognition is often difficult. The maternal mortality rate of rupture of the uterus, now one of the highest of any obstetric complication, can be substantially reduced by earlier diagnosis of occult rupture, which, they emphasized, must be considered frequently in order to be made early.

Gordon and Rosenthal⁽⁷⁾, in an analysis of 30 puerperal deaths due to ruptured uteri occurring in Brooklyn during a 6-year period,

Table 2
Rupture of the Pregnant Uterus

Author	Period	No. Deliveries	No.	Incidence
Sheldon	1918-1934	37,554	26	1:1829
Delfs and Eastman	1920-1945	57,574	53	1:1010
Dugger	1931-1941	318,103	105	1:3029
Brierton	1932-1946	111,753	57	1:1961
Donnelly	1931-1948	101,127	39	1:2593
Ingram, Alter, and Carter	1931-1950	16,654	13	1:1281
Beacham and Beacham	1913-1950	127,522	96	1:1328
Present Study	1950-1953	3,221	7	1:460

found that only 12, or 40 per cent, of the cases were diagnosed early enough for successful treatment. In the present study, during the past four years the 100 per cent survival rate of the mothers and the 71 per cent survival of the babies is attributed to prompt diagnosis and early institution of active treatment.

The importance of prompt and adequate whole blood replacement cannot be overemphasized. In the 30 deaths studied by Gordon and Rosenthal⁽⁸⁾, only 3 patients received adequate transfusions. With effective present day antibiotics to combat infection, delay in diagnosis and inadequate blood replacement account for the large majority of the maternal deaths. Beacham⁽⁴⁾ reported that the establishment of the residency system, the blood banks, and immediate therapeutic action had reduced the maternal mortality in ruptured uteri in the Charity Hospital from 61 to 12 per cent.

Symptom-Complexes Encountered: Classic Type

The most interesting and illuminating findings in the review of these 7 patients has been the varied and yet definite symptom-complexes exhibited. Only one patient, no. 1, presented the classic symptomatology of the ruptured pregnant uterus as it is generally taught. This patient had prolonged excruciating abdominal pain, followed by cessation of contractions, absence of fetal heart sounds, palpable fetal parts, and profound blood loss and shock. There was a seven hour delay in diagnosis. This patient's baby perished, and we are indeed fortunate to have a living mother.

Case 1

The patient, a 24 year old white woman, para 1-0-1, was admitted to the hospital on August 5, 1950, in active labor. The expected date of confinement was September 4, 1950. The patient had had a previous cesarean section for placenta previa six years previously in another hospital. The postpartum course was said to have been uneventful.

This pregnancy was normal until the onset of premature labor at 36 weeks. Previous pelvimetry had proved to be adequate, and a trial of labor was elected. During the first 12 hours after admission contractions were fairly forceful, and labor progressed slowly up to 5 cm. dilation of the cervix, with the vertex in the left occiput anterior position at station 1 plus. At 4 a.m. on the following day, 14 hours after the onset of labor and seven hours prior to operation, the patient began to complain of severe pain in the lower abdomen, became nauseated, and vomited. Contractions continued at three to four minute intervals, the fetal heart sound remained good, and the blood pressure and pulse were unchanged. By 9:30 a.m. the blood pressure was showing

a definite drop, concomitant with a rise in pulse rate and paleness in color. Contractions were still present, and the fetal heart sound was still audible. There was no vaginal bleeding. A diagnosis of rupture of the uterus was apparent at this time. The intravenous administration of whole blood was started. Within the next hour, while waiting for the operating room to become available, the patient showed definite evidence of shock, contractions ceased, and the fetal heart sound became inaudible. Pelvic examination on the operating table showed the cervix to be 8 cm. dilated, and the vertex at station 2 plus and well fixed in the pelvis. Under spinal anesthesia the abdomen was rapidly opened. The abdominal cavity was filled with an estimated 1,000 cc. of fresh blood and old clots. The fetus and placenta were lying outside of the uterine cavity, with the membranes intact. The uterus was ruptured from the fundus to the cervix along the anterior wall, was turned inside out, and was contracted behind the fetus and membranes. The baby was extracted, difficulty being encountered in dislodging the head from the pelvis through the dilated cervix. The uterus was then removed by supracervical hysterectomy. The adenexal structures appeared normal, and were left intact. The patient was given a transfusion of 1,500 cc. of whole blood. The stillborn infant weighed 5 pounds, 14 ounces. The pathologic report read: Puerperal uterus with rupture. No excessive trophoblastic activity was found in sections of uterine wall. The patient was afebrile after 48 hours, made an uneventful recovery, and was discharged on the ninth postoperative day. She was well on routine visits through 1952.

Rupture of a Post-Cesarean Uterus

The second and probably most important symptom-complex is that of early rupture of a post-cesarean uterus as exhibited in patients 2 and 3. Both of these women had painful uterine contractions associated with definite superimposed lower abdominal pain, tenderness, increased rigidity over the affected area of the uterine wall, a rise in the pulse rate, and apprehension. Neither exhibited an alteration of uterine contractions, a change in fetal heart tones, external bleeding, or clinical shock. Both were under close medical supervision, with observation of vital signs; both were crossmatched with whole blood, and had an operating team available. The diagnosis was made from the early findings, and immediate transfusion and operation were instituted. Neither patient extruded the baby into the abdomen nor went into shock, and both babies and mothers survived total cesarean hysterectomy without undue stress.

Case 2

A 27 year old white woman, para 3-1-1, was admitted in early labor on January 28, 1953. The calculated date of confinement was February, 1953. In 1945 she had had a classic cesarean section, done elsewhere, at 6½ months of pregnancy because of premature labor with hemorrhage. The baby died. In 1948 she gave birth to a 7 pound, 14 ounce infant, delivered spontaneously under Trilene anesthesia, after six hours

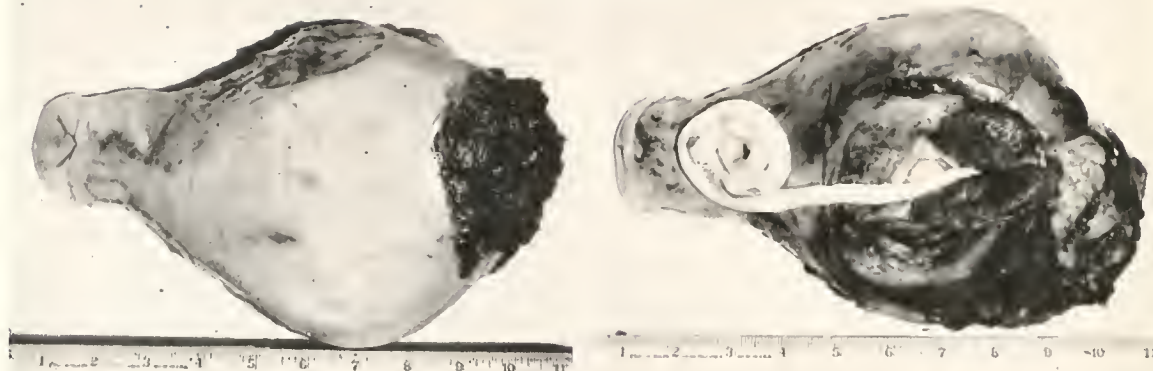


Fig. 1. A. Posterior view, showing rupture site superiorly. B. Anterior view showing rupture superiorly and operative site, with the placenta intact.

of labor. In 1950 she had an incomplete abortion at 3½ months of pregnancy, followed by dilatation and curettage.

The prenatal course was normal. Examination of the abdomen disclosed the old suprapubic mid-line scar, strong fetal heart sounds, and the vertex fixed in the left occiput transverse position. There was no localized uterine tenderness. The patient was placed under constant surveillance and typed and cross-matched with 2 units of whole blood. She did not begin having regular contractions until about 8 a.m. on the day following admission.

Four hours after the onset of true labor, the patient began to complain of moderately severe lower abdominal pain. The contractions occurred at five minute intervals, and the fetal heart sounds were good. The uterus was tender over the anterior surface, but no defect could be felt. The blood pressure dropped to 90 systolic, 50 diastolic from the previous level of 110 systolic, 75 diastolic, and the pulse rate was 100 and regular. A sterile pelvic examination in the operating room revealed the cervix to be 3 cm. dilated, the vertex minus 1 cm. in the lateral occiput transverse position, and the amniotic fluid clear. A transfusion of 500 cc. of whole blood was started, and the patient was operated upon immediately under cyclopropane anesthesia. An estimated 500 cc. of fresh blood was found in the abdomen. The rupture was in the upper pole of the incision, but had extended over the dome of the uterus into the mid-fundus rather than down the anterior surface of the old scar. The rupture was about 5 by 8 cm. in diameter, irregular in shape, and had a margin of placenta projecting through the rupture (fig. 1). The anterior surface of the uterus was rapidly opened in a lower mid-line incision, and a vigorous male infant, weighing 7 pounds, 9 ounces, was extracted. A total cesarean hysterectomy was done without difficulty. The patient received 1,000 cc. of whole blood and withstood the operation well. Recovery was uneventful, and she was discharged on the eighth postoperative day. Results were good through 1953.

Case 3

The patient, a 31 year old white woman, para 3-0-2, was first seen on January 22, 1953. The calculated date of confinement was July 21, 1953. In 1945 she had had a vaginal breech delivery after a three-day labor, resulting in a female stillborn infant, secondary to uterine inertia. In 1946 she had a

cesarean section at 8½ months of pregnancy, performed after a two hour labor and resulting in a female infant weighing 4 pounds, 5 ounces. Examination revealed a three months' pregnancy, with a probable bicornuate uterus unicolis. Pelvic measurements were adequate. The patient was placed on routine prenatal care and advised that she would be delivered by cesarean section, and possibly cesarean hysterectomy, in view of the two previous sections and presumed uterine disease.

On June 2, 1953, the patient was admitted to the hospital at 32 weeks because of backache and mild uterine contractions. The fundus measured 26 cm. above the symphysis, with the uterus situated on the left side of the abdomen as noted before. The fetal heart beat was good. The head was not engaged. General examination was negative.

The patient was typed, crossmatched and placed under observation of vital signs, and the operating room was alerted. She was given Nembutal and morphine for sedation, the contractions ceased, and she slept well throughout the first night. On the following day she again had irregular contractions, and cesarean section was contemplated; however, it was felt that by conservative observation labor might be forestalled and valuable time added to insure viability of the infant. She was given Demerol and had only mild, occasional contractions. At 2:45 a.m., June 4, 1953, she awakened with severe pain in the left lower quadrant of the abdomen and back. (See introductory paragraph, page 1, for the remainder of this case report.) The right tube and ovary were attached to a small muscular vestigial remnant of the right horn of the uterus at about the level of the lower uterine segment (fig. 2).

Unexplained Bleeding In the Third Stage of Labor

The third symptomalogic grouping is that of unexplained bleeding in the third stage of labor. All three of these patients exhibited immediate uterine hemorrhage during the third stage and one during the second stage of labor.

Patient 4, according to the reported history, had sufficient bleeding to warrant investigation of the lower uterine segment after

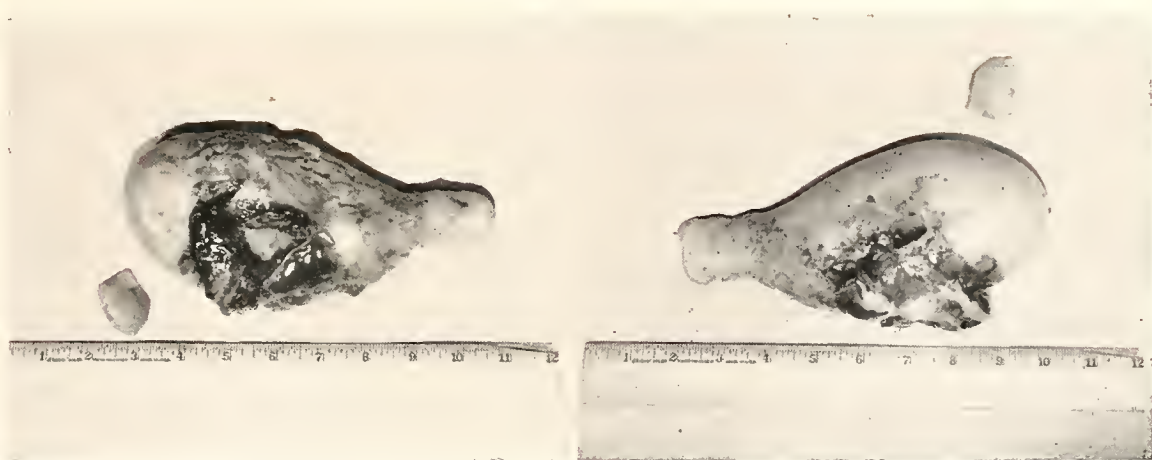


Fig. 2. A. Lateral view, showing rupture site. B. Anterior view, showing operative site and vesicular horn on the left.

the breech extraction of a hydrocephalic stillborn infant. The lower uterine segment was not examined, the rent was not discovered, some bleeding continued, and the patient hemorrhaged almost to exsanguination on the ninth postpartum day. Conservative measures of examination under anesthesia, curettage, and packing of the uterus were instituted after multiple blood transfusions; and, even on the first examination, the uterine laceration was not diagnosed in the face of overcautiousness and the acceptance of retained placental fragments as a cause for bleeding. After the second episode of bleeding two days later, a more thorough examination revealed the rent in the lower segment, and a total hysterectomy was performed.

Case 4

A 38 year old white woman, para 10-0-9, was first seen on March 8, 1951, because of profuse postpartum hemorrhage on the ninth postpartum day. The patient had been delivered by another physician on February 29, 1951, by breech extraction, of a stillborn hydrocephalic infant with spina bifida and club feet. Free painless bleeding had started one hour prior to admission. She was in shock and there was evidence of profuse bleeding on her clothes at the time of admission. The pulse was 120, and was weak and thready; the blood pressure was not obtainable. The abdomen was soft and relaxed, with the uterus palpable at the pelvic brim, and firm. Fluids and plasma were started immediately, followed by the administration of 1,500 cc. of whole blood. As soon as the state of shock was improved, the patient was taken to the operating room, where she was examined under cyclopropane anesthesia, and dilatation and curettage was performed. The cervix was open to the admission of a finger, and dilatation was not necessary. Digital examination revealed many fragments of placental tissue, which were removed by finger and sponge forceps. No other lacerations were identified in the cervix or lower uterine segment. The uterus was packed and the bleeding controlled. The uterine pack was removed on the second day, without significant bleeding.

Two days later the patient began to bleed profusely again, and was returned to the operating room. Under cyclopropane anesthesia a laceration was identified on the left lateral wall of the uterus, extending from the internal os into the lower uterine segment and completely through the uterine wall. The uterus and cervix were again tightly packed, and good hemostasis was obtained. The patient was given another 1,500 cc. of blood. Under gas-oxygen-ether anesthesia, the packing was removed and the abdomen entered. The uterus was found to be about three times normal size. There was no evidence of intra-abdominal or broad ligament bleeding. The left parametrial tissues were thickened and indurated. A total abdominal hysterectomy was performed. The tubes and ovaries appeared normal, and were salvaged. The patient was given another liter of blood during the operation, and withstood the procedure well. She was discharged on the ninth postoperative day in good condition. The pathology report was: Puerperal uterus with retained decidua; chronic cystic cervicitis with laceration; chronic metritis. Follow-up visits in the office throughout 1952 revealed an uneventful course, with good postoperative results.

Patient no. 5 had a precipitous labor with a progression from 4 cm. dilatation of the cervix to delivery in seven minutes. The delivery was spontaneous and the baby normal. There was a slow continuous flow of bright red blood during the immediate third stage. Examination revealed a lateral longitudinal rent in the lower uterine segment extending externally to the mid cervix and not involving the portio. The exposure was good, bleeding was not marked, and the depth of the laceration was limited to the uterine musculature. This laceration was repaired from below at delivery in the same manner that a cervical laceration would be repaired. There was no further bleeding, involution was normal, and recovery was uneventful.

Case 5

The patient, a 23 year old white woman, para 4-0-4, was admitted in early labor on April 2, 1952.

The calculated date of confinement was March 25, 1952. She had had four previous pregnancies. The first ended in a precipitous delivery at home in 1945. The second and third were normal hospital deliveries, occurring in 1947 and 1948 respectively. The fourth, in 1950, resulted in an assisted footling breech extraction after a nine hour labor. The record shows nothing to suggest occult lower segment rupture at that time.

This pregnancy was uneventful, culminating in the spontaneous onset of labor on April 2, 1952. Labor progressed from 4 cm. dilation at station minus 2 to delivery in about seven minutes. The second stage was very rapid and precipitous, with uncontrollable forceful expulsive efforts on the part of the patient. She had not received any oxytocic drugs. Spontaneous delivery, without episiotomy, of a normal 6½ pound female infant, was effected immediately under Trilene anesthesia. The placenta and membranes were delivered intact, spontaneously, four minutes later.

Immediately after delivery there was a trickle of free bright uterine blood. Examination revealed a right cervical lower uterine segment laceration extending from the internal os, not involving the portio, up the right lateral uterine wall for a distance of about 6 cm. The laceration extended through the myometrium, but there was no involvement of the major vessels. In the presence of these findings, it was decided to attempt immediate repair from below, rather than hysterectomy. This was done with interrupted no. 1 chromic catgut sutures in the same manner that one would repair the cervix. There was no further bleeding, no peritoneal signs, and no fever. The patient was discharged on the seventh postpartum day.

She was readmitted to the hospital on September 15, 1952, for total abdominal hysterectomy on the basis of multiparity, 5 normal living children, and rupture of the uterus six months previously. General examination was negative. Examination of the pelvis revealed a small cystocele and rectocele, and a first degree descensus uteri. The uterus was anterior, normal in size, and movable. There was a palpable thickened right paracervix and fornix scar. The portio was clean. Under gas-oxygen-ether anesthesia a total abdominal hysterectomy and appendectomy were performed without difficulty. The patient's postoperative course was uneventful, and she was discharged on the seventh postoperative day. Subsequent results have been good.

Patient no. 6 had a premature footling breech labor with a known incompetent cervix due to an old, extensive scar. The labor was slow, but without untoward symptoms until bleeding appeared after delivery of the breech. The possibility of laceration of the cervix and rupture of the lower segment had been anticipated, and was immediately diagnosed. Blood was transfused, and a total hysterectomy performed. In retrospect, an elective cesarean section certainly would have been better, and yet an elective section on a multiparous woman with a 3 pound 8 ounce baby hardly seemed justifiable. Both mother and baby have done well.

Case 6

A 34 year old Negro woman, para 4-3-0, was first seen during this pregnancy on August 6, 1953, with a diagnosis of four months intra-uterine pregnancy.

The calculated date of confinement was January 11, 1954. In 1948 she had been delivered at home under ether anesthesia of a stillborn 6 pound infant after a 12-hour labor. The delivery was complicated by postpartum bleeding. In 1949 pregnancy was terminated at six months with premature labor and delivery of a 1 pound, 8 ounce infant, which died. In 1951 two late spontaneous abortions at home were followed by profuse hemorrhage, removal of the retained placenta, and multiple blood transfusions; the last two obstetric complications were managed by us after the patient was admitted to the hospital. Multiple examinations had revealed an extensive left cervical laceration scar with extension into the left fornix. Pelvic measurements were adequate. Laboratory data were negative. It was felt that the patient's repeated late abortions were related to the incompetent cervix, secondary to obstetric trauma.

The patient's pregnancy was uneventful until her admission to the hospital on December 6, 1953, with spontaneous premature rupture of the membranes of one week's duration and at 31 weeks' gestation. The temperature was 100.6 F., and the blood pressure 112 systolic, 70 diastolic. A general examination was negative. The fetal heart sound was good. Radiologic examination of the abdomen confirmed the double footling breech presentation, left sacro anterior position. The patient began to have irregular contractions about 4 p.m. on the day of admission, with slow progression of labor throughout the night. By 10 p.m. on the following day, the presenting part was at station 1 plus, and there was only a rim of cervix left on the right. Three hours later the presenting part was on the perineum, and the feet were presenting at the introitus. The cervix was thought to be fully dilated, retracted on the left at the site of the old scar, but not completely retracted on the right. An assisted double footling breech extraction of a premature 3½ pound male infant was carried out without difficulty.

Just before delivery of the body, free bleeding began. The placenta was manually removed from the left lower lateral uterine segment, and appeared to be intact. Examination revealed a tear high into the left broad ligament extending from the old scar. There was free bleeding from the area. A pack was inserted into the uterus in the region of the rent to exert pressure until the uterus could be removed. A transfusion was started immediately, and the abdomen was rapidly entered under gas-oxygen-ether anesthesia. The rupture was within the leaves of the broad ligament and had extended above the level of the entrance of the uterine artery. A total hysterectomy was performed. The parametrial and paracervical tissues were friable on the left, but hemostasis was obtained without difficulty. The ureter was not involved. The vaginal cuff was left open for drainage. The patient withstood the procedure well and was given 1,500 cc. of whole blood. She was afebrile after the first postoperative day and was discharged on the seventh day. Recovery has been uneventful, and the baby has done well.

Occult Rupture of the Uterus

The fourth and final clinical picture is that of occult rupture of the uterus, as discussed by Ingram⁽³⁾. This patient probably had a spontaneous rupture during early labor under midwife care, and without the use of oxytocics. According to the history, labor ceased, the patient was referred to the hospital, and the fetal heart sound was never heard. The attending physician unsuccessful-

fully attempted a forceps extraction, and after failure, treated the patient for uterine inertia for 36 hours before referral to our hospital. On admission she complained of abdominal pain, was febrile, had an elevated pulse, was distended, showed definite peritoneal signs, and had easily palpable fetal parts. The cervix was fully dilated, the vertex in the occiput anterior position, and on the perineum. The macerated deadborn fetus was extracted vaginally with forceps, and a transverse lower segment rupture of the uterus was confirmed. Immediate total abdominal hysterectomy was done, with repair of lacerations of both vaginal fornices. The patient presented an interesting complication of transitory pressure damage to the sacral nerve routes, with resultant foot drop. In retrospect, it would seem that a vaginal delivery should not have been attempted, and yet abdominal extraction of the head, already on the perineum, through the uterine rupture and the abdominal cavity would have been as difficult as delivery from below.

Case 7

The patient, a 32 year old Negro woman, para 4-0-3, was referred on April 26, 1953, for delivery 36 hours after a failed forceps extraction in another hospital. The calculated date of confinement was April 22, 1953. The past obstetric history revealed normal spontaneous deliveries at home by a physician in 1945, 1947, 1949, and 1951. The heaviest baby weighed 7½ pounds; the longest labor lasted 12 hours, the shortest 3 hours. The patient was reported to have had an uneventful pregnancy under the care of her physician. She started into labor at about 2:30 p.m. on April 24, under the care of a midwife. After seven hours of reported good labor without progress, she was seen by a physician at 9 p.m. and was referred to the hospital because "labor had stopped." The patient stated that she was not given any injections and that no effort had been made to perform a delivery at this time. She said that she felt "weak and bad," and had to be moved to the hospital by stretcher, but that she had had no sudden sharp pain and had not fainted. She stated that she had abdominal pain after being admitted to the hospital, but had never had regular uterine contractions. On the morning of April 25 she was examined by her physician and found to be fully dilated, station 0 to 1 plus, vertex position, but not having contractions. He applied forceps and attempted to effect the delivery, but stated that he was never able to get a proper application and thus was not able to effect the delivery. He stated that force was not used and that there was no bleeding. The fetal heart sound was not audible at the time. The patient was given 1 minim of Pitocin at 30 minute intervals for 3 doses without effect. The patient was sedated, antibiotics were started, and fluids were administered intravenously for hydration. She was observed for 24 hours under this regimen, with no appreciable change in status. Late in the afternoon of the following day the temperature and pulse became elevated, and the abdomen more tender and distended. There was no evidence

of labor during this interval, and the fetal heart sounds were not audible. The patient was transferred to our hospital at 8:45 on the morning of April 26.

Examination on admission revealed the temperature to be 101.2 F., the pulse 112, respiration 40, blood pressure 135 systolic, 85 diastolic. The patient was in acute pain, apprehensive, and febrile, but not in shock. The skin was warm and dry. Examination of the heart revealed tachycardia only. The lungs were clear to percussion and auscultation. On examination of the abdomen the fundus measured 33 cm. above the symphysis; fetal heart sounds were not heard. Fetal parts were easily palpable anteriorly through the abdominal wall. There was moderate distention and generalized tenderness throughout the abdomen. Pelvic examination was deferred. The labia were markedly edematous and showed evidence of trauma; with spreading of the labia, the caput could be seen.

Blood studies revealed 3,200,000 red blood cells, hemoglobin 60 per cent, 6,350 white blood cells, with 81 per cent polymorphonuclears. The blood was labeled type A, Rh positive. A urinalysis was negative. The impression on admission was: pregnancy near term; intrapartum death of fetus, intrapartum-intrauterine infection; failed forceps delivery in another hospital 36 hours previously; anemia secondary to acute blood loss, and probably spontaneous rupture of the uterus with extrusion of the fetus into the abdomen. After transfusion, examination under saddle block anesthesia revealed marked edema of the entire vulva. Catheterization obtained 350 cc. of clear urine. The vertex was in right occiput anterior position, at station 2 plus, with the cervix fully dilated and retracted. There was passage of old, dark, blood-tinged fluid, with displacement of the fetal head, and the fetal face was felt to be macerated. Simpson forceps were applied and the head was extracted with moderate traction. Extraction of the shoulders was even more difficult, and a bilateral cleidotomy was performed, after which delivery was easy. There was a free flow of old, dark, blood-tinged, foul-smelling amniotic fluid.

Immediate examination revealed the uterus to be well contracted posteriorly. There was a wide rent extending from one vaginal fornix to the other, and a hand was introduced into the abdominal cavity, overriding the uterus. There was no free bleeding, and the patient's condition remained unchanged, with the blood pressure 130 systolic, 90 diastolic, pulse 120, and respiration 28. The abdomen was opened immediately through a mid-line incision. The uterus was ruptured, as previously noted, well contracted, and lying in the posterior portion of the pelvis. There was a wide laceration extending from side to side across the bladder reflection. The bladder base was edematous, but the peritoneum was intact, and there was no bladder involvement. The laceration extended into the parametrial tissues on both sides, but the uterine arteries were not involved in the clean transverse tear. There was approximately 500 cc. of bloody, green, foul-smelling fluid in the abdominal cavity. The uterus and cervix were removed. The vaginal fornices were then exposed and closed, with interrupted sutures re-creating the vaginal angles and incorporating enough of the lower paracervical and parametrial tissues to control the bleeding and obliterate the dead space. The central portion of the vaginal cuff was left open and a penrose drain placed into the cul-de-sac. The pelvis was peritonealized. The patient was given 1,000 cc. of whole blood, and withstood the operative procedure well. The macerated stillborn infant weighed 9 pounds, 11 ounces. The pathologic report was: Uterus compatible with ruptured pregnant uterus.

Postoperatively, the patient was given Terramycin

intravenously, placed on an anti-peritonitis regimen, given bowel suction and continuous bladder catheter drainage. The immediate postoperative condition was good. The temperature never exceeded 101 F. The indwelling catheter and penrose drain were removed on the fourth postoperative day. The patient was able to void a small amount, but retained a high residual urine, varying from 350 to 900 cc. She was kept in the hospital for 18 days after the operation, primarily because of the excessive residual urine, which did not seem to improve with the usual methods of drainage by catheter, parasympathomatic drugs, bladder irrigations with irritants, and scheduled voiding exercises. She continued to have 250 to 500 cc. of residual urine at the time of discharge. She was maintained on Gantrisin.

Postoperatively the patient complained of pain in the right leg followed by parathesia. There was no evidence of thrombophlebitis at any time. Approximately one week after the operation a definite right foot drop was noted on walking. The peroneal palsy seemed to be stabilized at the time of discharge, and the causalgia disappeared. Postoperatively the patient was followed in the office and did well except persistence of a urinary residuum and the foot drop. The vaginal cuff and fornices healed without difficulty, and there were no palpable masses.

An orthopedic consultation obtained on June 19, seven weeks postoperatively revealed the back to be entirely normal. There was apparent slight atrophy of the right gluteal area and measurable atrophy of the right thigh. There were sensory changes only in the lateral side of the right leg in the lower third. A fairly well outlined area of hyposthesia was noted. There were no sensory changes in the foot. Straight leg-raising was negative. The right Achilles reflex was slightly hypoactive as compared with the left. Muscle analysis revealed the hamstrings on the right to be definitely weaker than on the left. Quadriceps strength was equal. There was complete paralysis of the dorsal flexors on the right side including the extensors of the toes in the posterior tibial muscle. There was a mild contracture of the Achilles tendon, limiting dorsal flexion at least 100 degrees. The orthopedist's impression was paralysis due to root involvement of the fourth and fifth lumbar areas secondary to trauma. X-ray films of the lumbosacral spine were normal. A foot drop brace was made, and the patient was given large doses of thiamine.

Summary

1. There were 3,221 deliveries at Lenoir Memorial Hospital, from January 1, 1950, to December 31, 1953. There were 7 ruptured uteri during this period of study, constituting an incidence of 1 to 460 deliveries.

2. There were 32 post-cesarean section uteri. Twenty-one of these deliveries were effected by repeat cesarean section, and 13 (38 per cent) by the vaginal route. There were 3 ruptured post-cesarean uteri.

3. All patients with post-cesarean rupture exhibited classic scars at operation. One patient had had a previous vaginal delivery after cesarean section, which again illustrates, as other writers have cautioned^(1,3,4,8), that even with one or more vaginal deliveries after section, the patient is not necessarily

immune to rupture of the uterus.

4. There was 100 per cent maternal salvage and 57 per cent uncorrected, 71 per cent corrected, fetal salvage.

5. The patients in this series exhibited varied and yet definite symptom complexes. The symptoms may be classified as follows: (1) classic rupture; (2) early rupture of the post-cesarean uterus; (3) third stage bleeding; (4) occult rupture of the uterus.

6. All patients were treated by hysterectomy, 6 total hysterectomies and 1 supra-cervical in deference to the patient's shocked state.

Conclusions

Post-cesarean patients may be allowed to undergo labor, particularly when the indications for the section do not recur. Each pregnancy must be conducted under proper safeguards. These often quoted and frequently neglected precautions are repeated here for emphasis.

1. Immediately available hospital.
2. Awareness of patient and husband to the possible dangers associated with post-cesarean uteri.
3. Admission to the hospital with the occurrence of any untoward symptoms, regardless of the duration of pregnancy and always with early onset of labor.
4. Proved absence of cephalopelvic disproportion, abnormal presentation, and intercurrent complications which would alter normal labor.
5. Known indication, type of procedure, and postoperative course of previous cesarean section.
6. Adequate amounts of whole blood immediately available.
7. An alerted and available operating team during labor.
8. Careful observation by a physician with evaluation of all unusual symptoms and signs.
9. Immediate transfusion and operation with the appearance of abdominal pain, increased tenderness over the uterus, beginning apprehension, and elevation of pulse rate.

Patients demonstrating bleeding in the third stage of labor should be examined for possible rupture of the lower segment as well as laceration of the cervix. Examination should be mandatory in all breech deliveries, versions and extractions, and operative forceps deliveries.

If the generally listed figures of 50 per cent maternal mortality and 80 per cent fetal mortality are to be improved, the signs and symptoms of ruptured uterus must not be confined to the classic textbook picture of severe abdominal pain, cessation of contractions, absence of fetal heart sounds, palpable fetal parts, and profound blood loss shock, but should include signs and symptoms of early uterine rupture and occult rupture.

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Surgery as a profession: Our British traditions have now been cast aside. In the place of surgery as a vocation, a dangerous adventure calling to the stout of heart, we have surgery as a guaranteed career, offering a fixed number of beds requiring a fixed number of sessions to look after them, a steady supply of patients, a scheduled income rising steadily with seniority rather than proficiency, little chance of promotion however good one's work may be, employment till a statutory age, however one may deteriorate, no opportunity of further employment after that age however good one may be at the time, and a pension on retirement. To this safe haven, offered by the Welfare State, many are called, but few are chosen.—Sir Heneage Ogilvie, The Future of Surgery, Brit. M.J. 2:1438 (Dec. 18) 1954.

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Private practice: I am one who holds that the maintenance of private practice in some form is essential not merely to the future advance of British surgery but to the integrity of the National Health Service. It is fundamental that every sick man should have a right to the treatment his disability requires, regardless of his ability to pay for it. It is equally fundamental that he should have the right, when in doubt, to consult an expert of undoubted standing and integrity selected and employed by himself. Without such a right, no State service can remain efficient or command respect. It is clearly in the interest of the State that those whose advice is sought in consultation and those who work in its service should be the same.—Sir Heneage Ogilvie, The Future of Surgery, Brit. M.J. 2:1439 (Dec. 18) 1954.

RUPTURE OF THE PREGNANT UTERUS

PERCY J. McELRATH, M.D.

RALEIGH

All writers agree that rupture of the pregnant uterus at or near term is a serious complication. According to Eastman⁽¹⁾, 5 per cent of all maternal deaths are caused by rupture of the uterus. Its reported incidence varies greatly. Whitaker⁽²⁾ reported it as being 1 in 95, while Dugger⁽³⁾ reported 1 case in every 3,029 births. A more accurate ratio lies somewhere between these extremes. Brierton⁽⁴⁾ reports an incidence of 1 to 2,000 births.

The material for this paper is gathered from the cases treated since 1947. Nine cases of rupture of the uterus are included. The period of gestation in all cases was 38 to 40 weeks' duration.

Age and Race Incidence

The average age of this group was 31 years. The youngest patient was 21 years of age and the oldest 39 years. Seven of these patients were Negro and 2 were white. Table 1 gives the age and race incidence.

Table 1

Age and Race Incidence			
Age	Negro	White	Per Cent
14-20	0	0	0
21-30	5	1	66⅔
31-40	2	1	33⅓
TOTAL	7	2	100

Obstetric Factors

Parity and Maternal Mortality

Table 2 indicates the parity and also the maternal mortality. Delf and Eastman's⁽⁵⁾ report of 53 cases of rupture of the uterus did not include a single primigravida patient who suffered spontaneous rupture. No primi-gravida patient was encountered in this group.

Table 2

Mortality According to Pregnancies			
Classification	No.	Recovered	Died
Gravida I	0	0	0
Gravida II	2	2	0
Gravida III	1	1	0
Gravida IV	2	1	1
Gravida V	1	0	1
Gravida X	3	3	0
TOTAL	9	7	2

Duration of Labor

Table 3 indicates the hours of labor prior to rupture of the uterus. Two of the patients had no labor, 3 had less than six hours of labor, and 3 were in labor 12 hours. One patient was referred to the hospital after 72 hours of labor.

Table 3

Uterine Rupture In Relation to the Hours of Labor			
Hours of Labor	No. Patients	Recovered	Died
0	2	2	0
1-6	3	3	0
6-12	3	1	2
72	1	1	0
Total	9	7	2

Extent and Site of Rupture

Complete ruptures were found in 6 of the uteri. In 3 of these the fetus was found to be in the abdominal cavity. The site of rupture was in the lower segment in 6 cases. Three patients who had had previous cesarean sections had ruptures involving old classic scars.

Cause

Cesarean section

Four of the patients had had classic cesarean sections previously. The old cesarean scar was the site of rupture in 3 of these. One had had 2 cesarean sections.

One patient, a 38 year old woman (gravida X, para VIII, abortus I) had a cesarean section performed for the delivery of her first child, while the remaining 7 children had been delivered vaginally. Beacham⁽⁶⁾ called special attention to this type patient, saying, "Every cesareanized individual is entitled to close supervision during each subsequent pregnancy, remembering the fact that a patient who has had one or more vaginal deliveries after section is not necessarily immune to rupture of the uterus."

Noncesarean

Five of these patients had spontaneous rupture of the noncesarean variety. One patient (gravida V, para IV), who was extremely obese (weight, 300 pounds), was seen after advanced labor. Rupture in this case occurred after a prolonged second stage of labor, and was no doubt due to an unrecognized cephalopelvic disproportion.

Transverse presentation

Transverse presentation with prolonged labor (72 hours) was the cause of rupture in

1 case. The patient had been attended by a midwife, and the uterus was rupturing at the time of admission to the hospital.

One of the patients was delivered with low forceps after an uneventful labor. The placenta was retained, and exploration of the uterine cavity revealed an adherent placenta and also a complete rupture of the uterus. The pathologic diagnosis was placenta accreta.

The remaining 2 patients had complete rupture of the uterus when first seen. No causes could be found for the ruptures. Both private doctors denied using oxytotoxic drugs.

Traumatic rupture

Version and extraction was a contributing cause in 1 case. A 30 year old woman (gravida IX, para VII, abortus I) was admitted to the hospital after two hours of labor. The cervix was fully dilated. The fetus was in a transverse presentation. A version was accomplished with ease. The fetal head was delivered with Piper forceps. As the right blade was being introduced, a complete laceration of the uterus was discovered. The fetus was delivered and a hysterectomy performed immediately.

Diagnosis

The most frequent symptom encountered in this series was the "tearing pain" which 7 of the patients had. Extreme tenderness was elicited in all but 1 patient. Shock in varying degrees was seen in 6 patients, and in all cases it was out of proportion to the external bleeding. Recession of the presenting part was noted in 3 patients. One patient, with an incomplete rupture, complained of tenesmus.

Vaginal bleeding was not a prominent finding. Only 2 patients had external bleeding, and in only 1 of these cases was it thought to be moderately severe.

One patient who was being treated for toxemia of pregnancy, and who had had a previous cesarean section, was operated on because of moderate tenderness over the old operative wound. This patient had a complete rupture, with virtually no bleeding.

Treatment

Once the diagnosis is made, the treatment is clear-cut. Immediate steps must be taken to replace the blood loss rapidly. An adequate avenue for the administration of blood is necessary. In a patient who is in shock, a

cannula in a suitable vein best solves this problem. By using a pressure attachment, blood can be replaced at the rate of 500 cc. every 10 minutes. In a severely shocked patient, more than one portal of transfusion should be used.

Since it is possible to anticipate the need for blood in many patients, 1,000 cc. of properly crossmatched blood should be available for immediate use. In extreme emergencies we have used type O, Rh negative blood, with Witebsky substance until properly crossmatched blood was available.

Once rupture of the uterus is suspected, every effort should be made to keep the patient quiet and motionless. Any increase in intra-abdominal pressure or pressure against the uterus is likely to extend the laceration of the uterus or rupture a hematoma which has been confined in the broad ligament.

Prompt laparotomy should be performed regardless of the state of shock. A supracervical hysterectomy, which is the operation of choice, was performed on 8 of the patients. In the remaining case, the scar tissue surrounding the old classic scar was excised and the myometrium resutured.

Maternal Mortality

Two of the patients who had complete ruptures of the uterus did not survive. The maternal mortality for the patients with complete rupture of the uterus was 28.5 per cent. There were no deaths in those with incomplete ruptures; therefore, the mortality rate for the combined groups was 22.2 per cent. Fitzgerald⁽⁷⁾ reports an incidence of 54.75 per cent, while Bill⁽⁸⁾ reports an incidence of 21 per cent.

Report of Fatal Cases

Case 1

A 29 year old Negro woman (gravida V, para IV) was referred to the hospital in active labor. Her blood pressure at the time of admission was 180 systolic, 125 diastolic. She was extremely obese, and had a large, pendulous abdomen. She weighed in excess of 300 pounds. The progress of labor was normal, and after five hours the cervix was fully dilated. Vaginal examination revealed the vertex to be in the right occiput position at the level of the spines. X-ray pelvimetry did not reveal any disproportion.

The patient was allowed to remain in a second stage of labor for three hours. A vaginal examination was done to reevaluate the pelvis, and at that time recession of the presenting part was noted. There was no vaginal bleeding. There was an unavoidable delay of one hour and a half before the patient could be operated upon. During this interval she received whole blood.

When the abdomen was opened, the uterus was almost completely torn from its vaginal attachment. The bladder was ruptured. Attempts to locate and control the bleeding were unsuccessful. Eight thousand five hundred cubic centimeters of whole blood were given during the operation. The patient expired one hour after the operation was started.

The uterine rupture was thought to be caused by an unrecognized cephalopelvic disproportion.

Case 2

A 35 year old Negro woman (gravida IV, para III) was referred by her private doctor because of vaginal bleeding. She had been in labor 12 hours and was in a mild state of shock. The fetus could be felt in the abdominal cavity. Immediate operation was performed. The fetus and placenta were free in the abdominal cavity, which was filled with blood. A complete rupture of the uterus was found in the left lower segment. Two thousand five hundred cubic centimeters of whole blood was administered during the operation. A supracervical hysterectomy was done. The patient did well until the sixth postoperative day, when she died while having a bowel movement. Death was due to a pulmonary embolism.

Fetal Mortality

Five living babies were delivered; 2 of these died within 24 hours. One of those who survived was delivered with low forceps, and the remaining 2 were delivered by cesarean section.

The fetal salvage in this group was only 33 1/3 per cent.

Summary and Conclusions

1. Nine cases of rupture of the pregnant uterus which have been observed and treated in the past seven years are reported in this paper.

2. The maternal mortality in this series was 22 per cent, while the fetal mortality was 66 2/3 per cent. The very high fetal mortality can be explained by the fact that 4 of these patients were seen too late to institute measures to save the baby.

3. Patients who have had previous cesarean sections should be closely observed in subsequent pregnancies.

4. For every obstetric patient who has a prolonged labor, who requires any planned operative delivery in which difficulty is anticipated, or who has a uterus distended by a large baby, twins, or polyhydramnios, blood should be available for immediate transfusion.

5. Once the diagnosis of rupture of the uterus is made, it is imperative to insure rapid replacement of blood loss in adequate amounts.

6. Special attention should be directed toward the movement of these patients. They should be kept quiet, motionless, and should

not be allowed to exert any physical effort which would increase intra-abdominal pressure.

7. Immediate hysterectomy should be performed to control the hemorrhage. Operation should not be delayed because of shock.

8. The incidence of this complication can be reduced by better obstetric care.

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PRE-TOXEMIA OF PREGNANCY

JESSE CALDWELL, JR., M.D.

GASTONIA

The toxemias of pregnancy, now the major cause of maternal deaths, have been thoroughly studied by workers in various branches of medicine. Pathologists have carefully examined the body tissues at autopsy and accurately recorded their observations. Biochemists have analyzed the body fluids and excreta. Descriptions of the changes that occur in the urine and blood in the toxemias of pregnancy have helped fill many medical journals. Liver and kidney function tests have been done time and time again. The electrolytes, hormones, protein constituents, and enzymes have all received considerable study, both in our country and abroad. The clinicians have weighed these patients, starved them, fed them, induced labor in them, and have carried most of the responsibility regarding the outcome of the disease.

No doubt the frontier of toxemia of pregnancy will eventually be crossed. A casual glance at any medical journal will indicate the tremendous amount of work going on in both the clinical and non-clinical fields. Although we have had no famous name, such as Franklin Roosevelt or Damon Runyon, to lend to the formation of a toxemia of pregnancy foundation or fund, we are getting closer to the solution of this problem.

Methods of Early Detection

The toxemias of pregnancy have been classified by the American Committee on Maternal Welfare, and following some preliminary investigation, almost all known cases can be placed in the proper category; however, it is the prevention of the disease and not its cure that interests us primarily.

A number of unusual procedures developed during the past several years point to the possibility of detecting a potential toxemia patient before the signs and symptoms develop sufficiently to permit classification⁽²⁾.

Sex determination test

For a few months during the winter of 1952-1953 the prenatal sex determination test, a modification of the Richardson pregnancy test, was offered to a group of well adjusted private obstetric patients in Gastonia. These tests were performed by the same person and under rigid standard conditions. Among 38 tests done, there were only 24 correct predictions. In an analysis of the erroneous predictions, it was found that 4 of the patients had toxemia before they were delivered. Four others were delivered before the thirty-eighth week and 4 others after the forty-second week.

Since the prenatal sex determination test is based on differences in the manner of eliminating certain hormones, and since, most likely, the onset of labor is due to some change in the hormonal balance, the error in the premature and postmature group was not too surprising. It was the small group of patients having toxemia which attracted attention. The tests were done on these patients well in advance of any sign indicating toxemia. It may be that in the future some modification of this test may be used to predict which patients are likely to have the disease.

Cold pressor test

The use of the cold pressor test to detect vasospasm in patients has apparently not been used as much in obstetrics as it has by the internist in detecting patients with a hypersensitive vasomotor system. The test is usually carried out by immersing a hand up to the wrist in cold water. Hypertensive patients commonly show a greater rise in blood pressure than do persons with normal blood pressures. There is a considerable variation in normal subjects, however, and those who

have a rise of 20 mm. of mercury systolic and 15 mm. of mercury diastolic are classified as hyperreactive and are believed to be liable to manifest essential hypertension at some future date⁽¹⁾.

Odell and Aragon⁽²⁾ have used this test on some pregnant patients, and have found certain changes in kidney function as well as an elevation in blood pressure. They attribute these changes to vascular spasm. Although the test has been used in a few pregnant patients, it has not been adequately explored as a means of detecting pre-toxemia patients.

Flicker photometry

In 1951, Brill and associates⁽³⁾ reported on their elaboration of the Krasno-Ivy photometer, which they used to determine the flicker fusion threshold in pregnant patients. They concluded that it was possible to detect early vascular spasm in pregnant patients and therefore to predict the onset of toxemia of pregnancy some two to eight weeks before other clinical signs were manifested.

This test was performed by placing the patient in front of an illuminated frosted glass window behind which was a constant light. With the ordinary 60 cycle alternating electric current, a light bulb will flicker 60 times per second, but ordinary vision will see it as a constant light. This machine was so constructed as to control the flickers per second, and as the flicker rate was lowered, the patient signified when she first noticed a flicker in the light. After several tests were made, nitroglycerin was given to the patient and further tests were made in an effort to determine whether or not there was any change in the ability to recognize flicker.

In normal subjects they found that the administration of nitroglycerin produced a dilatation of the arterioles and caused congestion in the retina. This resulted in some impairment in the ability to recognize flicker. In patients having vasospasm, nitroglycerin relieved the spasm somewhat, improved the circulation of the retina, and increased the ability to recognize flicker at a higher rate.

Enzymal abnormalities

Occasionally, abnormalities in amounts of certain enzymes, such as glucuronidase and histaminase, in toxemia of pregnancy are reported. Odell⁽⁴⁾ of Chicago demonstrated, in 1948, that glucuronidase levels may be used

to warn the obstetrician of impending pre-eclampsia. This enzyme, which has to do with carbohydrate metabolism, may in some reflect the metabolism of the hormones of pregnancy, and may not necessarily be a prime factor itself.

Predisposing conditions

We know of a few conditions in which toxemia of pregnancy is more prevalent than in any group of pregnant patients taken as a whole. These are diabetes, Rh isoimmunization, primiparity, preexisting renal disease, polyhydramnios, multiple pregnancy, and hydatidiform mole. The presence of any one or a combination of these conditions should automatically place that patient in the pre-toxemic group. The largest group in the above list is obviously the primiparous.

Excess Fluid and Sodium Retention

One early clinical sign of developing toxemia which is available to all of us is that of increased retention of water. It has been reported that toxemia is six times more likely to occur in those patients who retain excessive amounts of water than in those who do not. However, this may be an instance of placing the cart before the horse.

The excess fluid retention has been attributed to (1) reduced oncotic pressure due to decreased plasma proteins, (2) increased venous pressure, and (3) high levels of steroid hormones (estrogens and progesterone), which are capable of delaying the excretion of electrolytes and water.

The increase in weight due to good nutrition during pregnancy is not to be confused with that due to the retention of water. Good nutrition in pregnancy is now being stressed more than ever. Patients are being encouraged to increase their daily consumption of protein foods and to live active and vigorous lives requiring a considerable number of calories.

Along with the increased retention of water in developing toxemia, there is a corresponding increase in sodium retention. By restricting the intake of salt and by the use of certain diuretic agents⁽⁵⁾, retention of water has been found to be controllable to some degree. It is around the elimination of sodium that the management of pre-toxemia revolves at this time⁽⁶⁾.

The records of 100 consecutive, recently delivered, private primiparous patients of my

Table 1

Study of 100 Consecutive Primiparous Patients	
Average age of Patient	22.6 years
Average weight before pregnancy	123.4 pounds
Average weight at term	150.6 pounds
Average weight gain	27.2 pounds
Average weight gain last trimester	9 pounds

own were reviewed in order to determine the presence, if any, of clinical pre-toxemic signs. Pertinent findings are summarized in table 1. The average weight gain during the last trimester was 9 pounds, exactly one-third that of the entire pregnancy—27.2 pounds.

These patients, in general, were not restricted as to caloric intake except in a few instances. They were advised to include some protein with every meal and not to be too concerned about their gradual gain in weight.

Treatment and Response

Table 2

Regimen	Response to Management				
	No. Patients	Average Week Begun	Response None	Fair	Good
Salt-poor diet	60	33	28	22	10
Ammonium chloride	11	37	1	7	3
Diamox ^a	10	36	1	4	5

^a 2-acetylaminio-1, 3, 4-thiadiazole-5-sulfonamide (Lederle)

Sixty of these patients showed a sudden abnormal increase in weight or some edema. Ten patients eventually manifested hypertension or albuminuria, and were classified as preeclampsics. Table 2 shows the response to management.

As soon as a patient showed a sudden jump in weight or some demonstrable edema in the feet or pretibial region, she was placed on one of the regimens shown. All the patients were initially placed on the salt poor diet. Those later receiving ammonium chloride and Diamox were also kept on the salt-poor diet. The average time for initiating this regimen was the thirty-third week.

The results showed that there was no response in 28 cases, a fair response in 22, and a good response in 10. For this study, some improvement in the edema and a weight loss of up to 3 pounds were considered a fair response. A good response was one in which there was disappearance of the edema and a weight loss of 3 or more pounds. On the salt-poor diet there was a favorable response in slightly over 50 per cent of the patients.

The response to sodium chloride seemed to be somewhat better. Ammonium chloride was prescribed for those patients

who continued to show some edema or rapid weight gain despite being on a salt-poor diet.

By December, 1953, no results in the use of Diamox in the treatment of toxemia of pregnancy had been reported. This drug is a sulfonamide, but its organic structure and pharmacologic activity are totally different from the present day bacteriostatic sulfonamides. The drug is a specific inhibitor of the renal enzyme carbonic anhydrase, and the result of this inhibition is the increased excretion of base and water.

Diamox has been used on a number of pregnant patients but only the primiparous cases in the so-called pre-toxemic stage are reported here. A tablet containing 250 mg. of the drug is administered daily by mouth at breakfast time. The patients state that a few hours later they notice the diuretic effect, and usually by the second day the edema has disappeared or greatly improved. These patients were placed on the drug for 7 days, following which they were evaluated for response. The percentage of patients showing a good response with Diamox was higher than in the other two groups.

Summary

In order to study further the toxemias of pregnancy, efforts are now being made to recognize patients in the pre-toxemic stage. A few of the procedures which may be used for this purpose have been presented. A study of 100 consecutive, recently delivered, private patients has been reported, showing that 60 per cent retained excessive amounts of water while on a high protein but otherwise nonrestricted diet.

The response to several methods of management is presented. Ammonium chloride or Diamox given in addition to the salt-poor diet seems to produce a satisfactory response in cases of excessive water retention.

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A FIVE-YEAR SURVEY OF TUBAL LIGATIONS

FLEETUS L. GOBBLE, JR., M.D.

THOMAS PETTY, M.D.

and

JAMES F. DONNELLY, M.D.

WINSTON-SALEM

In 1949 a survey by the American College of Surgeons indicated that many tubal ligations were being performed in North Carolina hospitals without justifiable indications. This criticism stimulated both hospitals and physicians to inquire seriously into the problem of the legality of tubal ligations. In 1950 John S. Bradway, Director of the Duke University Legal Aid Clinic, published an excellent discussion of the legality of human sterilization in North Carolina⁽¹⁾.

Involuntary sterilization does not constitute a serious problem, since the law establishing the Eugenics Board in 1933 clearly limits the legal implications of the surgeon. The law states that sterilization of a mentally defective, feeble-minded, or epileptic person is "for the best interest of the mental, moral, or physical improvement of the patient," or "for the public good," or "is needed to prevent the probable procreation of a child, or children, who would have a tendency to serious physical, mental, or nervous disease or deficiency." Except for gross negligence the surgeon is relieved of legal responsibility in performing the sterilization. The law further provides in Section 17: "Nothing contained in this article shall be construed so as to prevent the medical or surgical treatment for sound therapeutic reasons of any person in this state, by a physician or surgeon licensed in this state, which treatment may incidentally involve the nullification or destruction of the reproductive functions."

Voluntary tubal ligation for clear-cut medical indications, as in the case of involuntary sterilization, does not constitute a serious problem. There is, however, no law in the North Carolina statutes which justifies or protects the physician when tubal ligation is performed for the sole indication of *multiparity*. Many hospitals and physicians have turned to the Committee of Maternal Welfare of the Medical Society of North Carolina for a standardized policy regarding indications for sterilization of women. This en-

tire problem was re-evaluated in 1953 by Drs. Donnelly and Lock in the NORTH CAROLINA MEDICAL JOURNAL⁽²⁾. It was felt that neither the Committee on Maternal Welfare nor the hospitals could establish inflexible rules regulating tubal ligation on any sound legal basis. To study actual practices, a survey of tubal ligations performed in two separate hospitals of a representative North Carolina city was undertaken. Only those cases in which the operation was performed for the sole purpose of tubal ligation were selected for study. In many instances tubal ligation was apparently the motive for surgery, although associated with many unrelated pelvic and vaginal procedures, such as uterine suspension, removal of ovarian cysts, chronic appendicitis, and perineal repair.

Incidence

In a five-year period from 1948 through 1952, 533 tubal ligations were performed. This represents an incidence of 3.8 per cent in 14,286 deliveries, or one sterilization in 27 deliveries. West reported a postpartum sterilization rate in two Honolulu hospitals as 3 per cent of all deliveries in 1948 and in the first part of 1949, 5.5 per cent, or almost double that of the previous year⁽³⁾.

Table 1
Incidence of Involuntary
and Voluntary Sterilization

533 Tubal Ligations in 14,286 Deliveries	Number	Per Cent
Involuntary	12	2.3
Voluntary		
Elective—multiparity	378	70.9
Medical	143	26.8
Total	533	100

In table 1 the cases are divided into involuntary and voluntary groups. Twelve cases involved sterilizations which were performed by order of the Eugenics Board of North Carolina—10 for mental deficiency, 1 for idiopathic epilepsy, and 1 for schizophrenia. One hundred forty-three sterilizations, or 26.8 per cent, were performed for medical indications. In many instances these medical indications were listed along with multiparity as the justification for the procedure, although it was obvious in some cases that the medical indication alone would have been insufficient cause for sterilization. Three hundred seventy-eight elective tubal ligations were performed with multiparity as the sole indication. Uncertainty of the legal status of

Table 2

Involuntary and Voluntary Sterilizations In Hospitals A and B

	1948	1949	1950	1951	1952
Classification	A-B	A-B	A-B	A-B	A-B
Involuntary	5 1	0 0	1 2	0 1	2 0
Voluntary					
A. Elective—					
Multiparity	22 78	25 78	26 41	22 36	28 22
B. Medical	24 8	14 12	12 15	16 20	8 14
Total	51 87	39 90	39 58	38 57	38 36

the physician and hospital centers in this group.

In table 2 it will be noted that the total number of tubal ligations in Hospital B declined 36 per cent in 1950 and 1951. In 1952 the total number was 60 per cent lower than in 1949. In 1950 the medical staff of Hospital B made consultation prior to tubal ligation mandatory. A similar consultation requirement was in effect in Hospital A prior to the period of survey. In 391 instances the operation represented the opinion of more than one physician. In 142 the operation was performed with no opinion other than that of the surgeon.

Medical and Psychiatric Indications

In table 3 the recorded medical indications are divided into general groups. Hypertensive cardiovascular renal disease constituted the most common medical indication. In this group toxemia, hypertension, and chronic renal disease occurred in this order of frequency. Heart disease, tuberculosis, and hereditary diseases accounted for about 10 per cent of the medical indications. The last two groups, psychiatric disturbances and miscellaneous diseases, constituted the most controversial medical indications, and accounted for 46 per cent of this group.

In table 4 psychoneurosis was recorded in 9 cases and emotional instability, chronic alcoholism, and psychosis accounted for a total of 4 cases. In only a small per cent of these instances was the diagnosis substantiated by psychiatric consultation.

In table 5 the miscellaneous medical diseases are listed in the order of their frequency of occurrence. Varicose veins, postpartum hemorrhage, bronchial asthma, physical inadequacy, Rh incompatibility, and habitual abortions with premature labor accounted for 66 per cent of the 53 cases. As is obvious, many of the diseases in this group

Table 3

Incidence of Medical Indications Recorded		
Medical Indication Recorded	No.	Per Cent
Hypertensive cardiovascular renal disease	62	43.4
Heart disease	7	4.9
Tuberculosis	7	4.9
Hereditary diseases	1	.7
Psychiatric disturbances	13	9.1
Miscellaneous diseases	53	37.0
Total	143	100

Table 4

Psychiatric Disturbances Recorded

Psychiatric Disturbances	No.
Psychoneurosis	9
Emotional instability	1
Chronic alcoholism	1
Psychosis	2
Total	13

Table 5

Miscellaneous Medical Diseases Recorded

Condition	No.
Varicose veins	13
Postpartum hemorrhage	6
Bronchial asthma	6
Physical inadequacy	4
Rh incompatibility	3
Habitual abortions and premature labor	3
Epilepsy	2
Ventral hernia	2
Diabetes	2
Otosclerosis	2
Hyperemesis	2
Aneurysm maxillary artery	1
Deformities of feet secondary to polio	1
Old cervical laceration	1
Pelvic relaxation	1
Retinal detachment	1
Lupus erythematosus	1
Bilateral club feet	1
Cauda equina injury with resultant intractable pain during pregnancy	1
Total	53

would not be considered valid medical indications for tubal ligation.

The Question of Multiparity

The 378 elective tubal ligations in which multiparity was the sole indication is the largest and most controversial group of patients. Here physicians must strive to find methods to standardize decisions and to establish them on a justifiable legal, medical, social, and moral basis.

Effect of Mandatory Consultation

In table 6 the effect of mandatory consultation upon the age of the patient at the time of tubal ligation is noted after 1949.

Table 6

An Age Analysis of Patients with Tubal Ligations for Multiparity In Hospitals A and B					
Age	1948	1949	1950	1951	1952
	A B	A B	A B	A B	A B
-19	0 1	0 2	0 0	0 0	0 0
20-24	0 15	0 18	0 4	2 3	0 3
25-29	3 30	4 28	7 11	3 11	4 6
30-34	10 23	14 19	8 18	8 15	11 10
35-39	9 7	5 11	7 6	3 6	9 3
40+	0 2	2 0	4 2	6 1	4 0

In table 7 the effect of mandatory consultation is evidenced by an increase in the number of living children at the time of tubal ligation. During the period of study Hospital A has considered five living children as the minimum necessary for elective tubal ligation. In 1953, in addition to the mandatory consultation rule, the staff of Hospital B further restricted elective tubal ligations to those patients 25 years of age with six living children, or 30 years of age with five living children.

Table 7

Tubal Ligations for Multiparity In Hospitals A and B According to the Number of Living Children					
Children Living	1948	1949	1950	1951	1952
	A B	A B	A B	A B	A B
1	0 0	0 0	0 0	0 0	0 0
2	1 9	0 13	0 4	1 2	0 0
3	4 23	2 23	4 9	0 9	3 5
4	4 23	4 26	5 19	0 11	4 7
5+	13 19	19 14	17 9	21 14	21 10
Not recorded	0 4	0 2	0 0	0 0	0 0

In table 8, 3 tubal ligations for multiparity alone were performed upon patients below the age of 20. It is doubtful if the patient's consent for operation could be considered legal. Forty-five patients, or 11.9 per cent, were between the ages of 20 and 25 years. One hundred and seven patients, or 28.3 per cent, had tubal ligations performed between 25 and 30 years of age. Thus, 41 per cent of the patients were below the age of 30 years at the time of sterilization. Twenty-one patients had tubal ligations after the age of 40. In this group hysterectomy may have been consid-

Table 8

Number and Incidence of Sterilization In Both Hospitals According to Age		
Age	No.	Per Cent
-19	3	0.8
20-24	45	11.9
25-29	107	28.3
30-34	136	35.9
35-39	66	17.5
40+	21	5.6
Total	378	100

Table 9

Number and Incidence of Sterilization In Both Hospitals According to Living Children		
Living Children	No.	Per Cent
1	0	0
2	30	7.9
3	82	21.7
4	103	27.2
5+	157	41.5
Not Recorded	6	1.7
Total	378	100

ered by some to be the most desirable method of sterilization.

In respect to the number of living children, it will noted in table 9 that 30 patients had only 2 children at the time of operation. Fifty-six and eight-tenths per cent of the patients who had less than 5 living children underwent tubal ligations.

In 378 elective sterilizations for multiparity, 41 per cent occurred below the age of 30 years, and 56.8 per cent of the patients had fewer than five children. It is thus apparent that many sterilizations have been performed upon young women with relatively low parity. The experience of Hospital B indicates that the total number of tubal ligations can be drastically reduced by hospital staff rules. The exclusion of sterilization from the armamentarium of the physician, however, is not the objective, nor is it a solution to the problem. Any effective rule must be flexible in its application. Certainly, the young patient of low parity should be protected from sterilization except for valid medical indications.

At the other extreme, however, is a large group of patients with whom the physician frequently comes in contact—namely, those with valid medical, social, and economic justification for tubal ligation on the basis of multiparity. Many of these patients refuse the operation because of ignorance or superstitions surrounding it. Richardson and Gamble, in 1950, pointed out that "at one university only 59 per cent of the male students knew that impotence would not result from sterilization, while only 38 per cent of the women students understood that menstruation would continue after tubal closure. Many incorrectly believed that frigidity resulted. Thinking in terms of castration, the barnyard form of unsexing, patients to whom such a relief is suggested—and their families—fear loss of normal sex response and even apprehend changes in appearance."⁽¹⁾ It is in

this group that a positive educational program by the medical profession to decrease the ignorance and apprehension on the part of the general public would be helpful in further reducing the maternal mortality rate.

Comment

It would appear from this survey that a large number of patients who are too young and have too few living children have been sterilized. The laws regulating involuntary sterilization are quite clear. It is also felt that no physician would be considered liable for tubal ligation in clear-cut medical indications in the presence of adequate medical consultation. Since there is no law in North Carolina which expressly permits sterilization for multiparity, and since there is no legal precedent established in which multiparity was an indication for sterilization, it is at this point that the individual physician is concerned with his legal status. In fact, he is caught between the emotional influences of the patient, his sense of medical, moral, and social obligation to the patient, his legal standing in case of suit, and his professional ethics in relation to physicians in his community.

The problem could most likely be solved best on a local level. A committee similar to that described by Dr. Thornton at the University of Virginia, which has been helpful in solving the problem of therapeutic abortions at that institution, should be established in each hospital⁽⁵⁾. Such a committee would have no legal standing, but could render an opinion in each case on whether or not an indication for tubal ligation exists. This opinion, when made in writing and incorporated in the record of the patient, would establish in a given community a uniformity of practice. It would relieve the physician of the emotional factor arising in his relationship with the patient and his ethical standing in relation to other physicians. In time, a uniform policy of this nature would doubtless carry considerable legal support if a test of legality should arise.

Summary

1. A survey of 533 tubal ligations occurring in two independent hospitals in a representative North Carolina city has been reported.
2. Twelve involuntary and 521 voluntary sterilizations occurred. Of the voluntary group

378, or 70.9 per cent, were performed for the sole indication of multiparity.

3. Forty-one per cent of the operations occurred in patients below the age of 30, and 56.8 per cent in patients with fewer than 5 children.
4. The need for a positive educational program is cited. The widespread ignorance and apprehension exhibited by the general public regarding the nature and effects of the operation in many instances is responsible for refusal of tubal ligation where it is urgently needed.
5. The establishment of a committee in each hospital to render an opinion regarding the existence of any indications for tubal ligation in each case is recommended.

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THE DIAGNOSIS OF ECTOPIC PREGNANCY

A Review and Case Reports

E. C. GARBER, JR., M.D.

FAYETTEVILLE

A review of the literature indicates that the incidence of ectopic pregnancy has increased during the past few years. Schumann⁽¹⁾ reported it as 1 to 303 intrauterine gestations in the city of Philadelphia during 1918. Anderson⁽²⁾, using Schumann's method of correction, reported the incidence to be 1 to 182 in the city of Baltimore during 1944-1948 (table 1). Schumann's correction factors are probably high.

More recent figures indicate that ectopic pregnancy is probably more frequent than the incidence quoted above. Because of the apparent increase in frequency and the serious mortality and morbidity of this condition, we should attempt to improve our diagnostic accuracy. Although the literature contains numerous reports and analyses on ectopic pregnancy, the correct diagnosis remains one of the challenges of surgical judgment. The classic picture of amenorrhea, bleeding, pain, and a palpable mass

Table 1
Incidence

Author and Year of Study	Corrected Data—Schumann's Method		
	Ectopic (+ 10%)	Births (+ 25%)	Ratio
Schumann 1918	186	55,441	1:303
Anderson 1944-1948	947	172,409	1:182

is relatively infrequent as compared with the various signs and symptoms that this disease may present.

This review is presented in an attempt to help improve our diagnostic accuracy. Reports by numerous authors have been studied and tabulated. Since it was not possible to base this study on any certain number of cases, the figures presented will vary from table to table.

Symptoms

Pain

Practically all cases of ectopic pregnancy manifest some sort of abdominal pain. Table 2 shows that 90.3 per cent of 1,975 patients complained of pain. The pain may be unilateral, but frequently it is generalized. Cramping pain is complained of most frequently, but it may be sharp in acute rupture. Dull aching pelvic pain is more frequent in patients with a pelvic mass. Shoulder pain (table 3) was present in 17.8 per cent of 808 cases, whereas rectal pain or pressure (table 4) was present in 12.9 per cent of 887 cases. In the absence of pain, the diagnosis of ectopic pregnancy should be guarded.

Table 2
Pain

Author	No. Cases	No. Cases With Pain	Per Cent
Henderson and Bean ⁽³⁾	302	302	100.0
Priddle, Moulton and Dennis ⁽⁴⁾	136	122	90.0
Johnson ⁽⁵⁾	245	214	87.3
Carrabea and Silberblatt ⁽⁶⁾	150	145	96.7
Bell and Ingersoll ⁽⁷⁾	130	120	92.0
Ware and Winn ⁽⁸⁾	150	148	98.1
Ware ⁽⁹⁾	146	146	100.0
Lucci ⁽¹⁰⁾	70	68	97.0
Bookrajian and Charles ⁽¹¹⁾	125	123	98.4
Beecham, Collins, Thomas, and Beecham ⁽¹²⁾	381	258	67.8
Ward ⁽¹³⁾	140	137	97.8
Total	1975	1783	90.3

Table 3
Shoulder Pain

Author	No. Cases	No. With Shoulder Pain	Per Cent
Henderson and Bean ⁽³⁾	302	76	25.0
Priddle, Moulton and Dennis ⁽⁴⁾	136	3	0.7
Johnson ⁽⁵⁾	245	34	13.8
Bookrajian and Charles ⁽¹¹⁾	125	31	24.8
Total	808	144	17.8

Table 4
Rectal Pain or Pressure

Author	No. Cases	No. With Rectal Pain or Pressure	Per Cent
Priddle, Moulton and Dennis ⁽⁴⁾	136	4	2.0
Johnson ⁽⁵⁾	245	53	21.6
Bookrajian and Charles ⁽¹¹⁾	125	10	8.0
Beecham, Collins, Thomas and Beecham ⁽¹²⁾	381	48	15.3
Total	887	115	12.9

Table 5
Abnormal Bleeding

Author	No. Cases	No. With Abnormal Bleeding	Per Cent
Henderson and Bean ⁽³⁾	302	259	85.8
Priddle, Moulton and Dennis ⁽⁴⁾	136	82	61.0
Johnson ⁽⁵⁾	245	110	44.9
Carraba and Silberblatt ⁽⁶⁾	150	150	100.0
Bell and Ingersoll ⁽⁷⁾	130	109	83.8
Ware and Winn ⁽⁸⁾	150	121	74.0
Ware ⁽⁹⁾	146	114	78.0
Lucci ⁽¹⁰⁾	70	56	80.0
Bookrajian and Charles ⁽¹¹⁾	125	92	75.2
Beecham, Collins, Thomas and Beecham ⁽¹²⁾	381	377	98.9
Leff and Winsor ⁽¹⁴⁾	172	143	83.1
Ward ⁽¹³⁾	140	127	90.7
Draa and Baum ⁽¹⁵⁾	224	219	93.3
Total	2371	1959	82.6

Bleeding

Abnormal vaginal bleeding was found in 82.6 per cent of 2,371 cases. (table 5). Bleeding is usually slight and intermittent, but may be continuous. Slight bleeding is frequently present for several days before the onset of pain. The absence of profuse

Table 6
Amenorrhea

Author	No. Cases	No. With Amenorrhea	Per Cent
Priddle, Moulton and Dennis ⁽⁴⁾	136	112	81.0
Johnson ⁽⁵⁾	245	68	27.7
Carraba and Silberblatt ⁽⁶⁾	150	113	75.3
Ware and Winn ⁽⁸⁾	150	74	49.3
Ware ⁽⁹⁾	146	73	50.0
Lucci ⁽¹⁰⁾	70	16	23.0
Bookrajian and Charles ⁽¹¹⁾	125	85	68.0
Beecham, Collins, Thomas and Beecham	381	70	18.5
Leff and Winson ⁽¹⁴⁾	172	133	77.3
Ward ⁽¹³⁾	140	88	62.8
Total	1715	832	48.5

bleeding and clots is significant, particularly when abortion or pelvic inflammatory disease must be ruled out. When bleeding is profuse, the diagnosis is usually not ectopic pregnancy unless another condition such as uterine fibroids co-exist.

Amenorrhea

Amenorrhea was present in 48.5 per cent of 1,715 cases (table 6). However, a carefully taken history often reveals an abnormal period. The patient should be questioned carefully as to the duration and amount of the last period.

Shock

Shock was present in 22.9 per cent of 1,903 cases. (table 7). Syncope was recorded in 44 per cent of cases.

Table 7
Shock

Author	No. Cases	No. With Shock	Per Cent
Henderson and Bean ⁽³⁾	302	91	30.1
Priddle, Moulton and Dennis ⁽⁴⁾	136	45	33.0
Johnson ⁽⁵⁾	245	81	33.0
Carrabba ⁽⁶⁾	150	15	10.0
Bell and Ingersoll ⁽⁷⁾	130	20	15.3
Lucci ⁽¹⁰⁾	70	19	27.1
Bookrajian and Charles ⁽¹¹⁾	125	44	35.2
Beecham, Collins, Thomas and Beecham ⁽¹²⁾	381	78	20.4
Ward ⁽¹³⁾	140	24	17.1
Draa and Baum ⁽¹⁵⁾	224	20	8.9
Total	1903	437	22.9

Table 8
Nausea, Vomiting or Gastrointestinal Complaints

Author	No. Cases	No. With Complaints	Per Cent
Henderson and Bean ⁽³⁾	302	86	30.0
Priddle, Moulton and Dennis ⁽⁴⁾	136	12	9.0
Johnson ⁽⁵⁾	245	125	51.0
Carrabba ⁽⁶⁾	150	42	28.0
Total	833	265	31.8

Nausea and vomiting

Nausea, vomiting, or gastrointestinal disturbances were present in 31.8 per cent of 833 cases, as indicated in table 8.

Physical Findings

The temperature was below 100 F. in 79.7 per cent of 749 cases, as shown in table 9. The blood pressure is usually normal in those patients with a pelvic mass and below 100 systolic in the acutely ruptured cases. The pulse is characteristically rapid when ectopic pregnancy is ruptured. Pulse rate and volume give a more accurate indication as to the patient's condition than does the blood pressure.

Table 9
Temperature

Author	No. Cases	Temperature below 100 F.	Per Cent
Ware and Winn ⁽⁸⁾	150	82	54.6
Ware ⁽⁹⁾	146	110	75.0
Bookrajian and Charles ⁽¹¹⁾	125	107	85.6
Beecham, Collins, Thomas and Beecham ⁽¹²⁾	328	299	91.1
Total	749	598	79.7

Abdominal findings

Abdominal findings vary greatly (table 10). Tenderness was recorded in 68.7 per cent of 891 cases. The amount of blood that may be in the abdominal cavity despite minimal abdominal findings, however, is remarkable. A shifting dullness can frequently be demonstrated when a large amount of blood is present.

Pelvic findings

The chief pelvic findings in ectopic pregnancy are tenderness, particularly in the

Table 10
Abdominal Tenderness

Author	No. Cases	No. With Abdominal Tenderness	Per Cent
Johnson ⁽⁵⁾	245	26	10.6
Bookrajian and Charles ⁽¹¹⁾	125	114	91.2
Beecham, Collins, Thomas and Beecham ⁽¹²⁾	381	343	90.0
Ward ⁽¹³⁾	140	130	92.8
Total	891	613	68.7

cul-de-sac, and pain on manipulation of the cervix. Pain on cervical manipulation was found in 63.6 per cent of 891 cases (table 11).

Table 11
Pain on Cervical Manipulation

Author	No. Cases	No. with Pain On Cervical Manipulation	Per Cent
Johnson ⁽⁵⁾	245	108	44.0
Bookrajian and Charles ⁽¹¹⁾	125	70	56.0
Beecham, Collins, Thomas and Beecham ⁽¹²⁾	381	305	80.0
Ward ⁽¹³⁾	140	84	60.0
Total	891	567	63.6

An abnormal pelvic mass was palpated in 49.4 per cent of 2,221 cases (table 12). When discovered, the mass is usually posterior or lateral, and soft and elastic. It is usually quite tender.

Table 12
Palpable Mass

Author	No. Cases	No. With Pelvic Mass	Per Cent
Henderson and Bean ⁽³⁾	302	231	76.5
Priddle, Moulton and Dennis ⁽⁴⁾	136	49	36.0
Johnson ⁽⁵⁾	245	188	77.0
Bell and Ingersoll ⁽⁷⁾	130	33	25.4
Ware and Winn ⁽⁸⁾	150	100	66.7
Ware ⁽⁹⁾	146	74	51.0
Lucci ⁽¹⁰⁾	70	48	68.0
Bookrajian and Charles ⁽¹¹⁾	125	57	45.6
Beecham, Collins, Thomas and Beecham ⁽¹²⁾	381	165	43.3
Ward ⁽¹³⁾	140	80	57.1
Draa and Baum ⁽¹⁵⁾	224	73	32.5
Leff and Winson ⁽¹⁴⁾	172	116	67.4
Total	2221	1098	49.4

Laboratory Findings

The leukocyte count is usually above 10,000 in the acute cases and also in approximately 30 per cent of the group with hematoma. The white cell count increases rapidly after rupture, but then drops to normal within 48 hours unless there is a recurrence of bleeding. When a pelvic mass is due to an ectopic pregnancy, the white count is usually lower than would be expected when the pelvic mass is inflammatory in origin. The red cell count is usually low in the acutely ruptured cases, and will be below 3,000,000 in about 50 per cent of all cases. A decreasing hemoglobin is more significant than the initial reading.

Diagnostic Procedures

Biologic or chemical pregnancy tests are frequently done. They are time-consuming, however, and when negative they do not exclude pregnancy. A positive test confirms the suspicion of pregnancy either intra- or extra-uterine. When interpreted properly, the test may be of some value in determining the nature of an adnexal mass.

Examination under anesthesia is a helpful aid. When this is done, the operating room should be in readiness for immediate laparotomy, as examination may aggravate bleeding. Dilatation and curettage may be of value. If chorionic tissue is found, the presence of a recent intrauterine pregnancy is obvious. Decidual tissue only is suggestive, but not absolutely indicative of ectopic pregnancy. Culdoscopy, colpotomy or needle aspiration of the pouch of Douglas have become popular and helpful diagnostic aids. Of the three, the posterior colpotomy incision provides more information. Draa and Baum⁽¹⁵⁾ recently reported 224 cases of ectopic pregnancy of which 34 per cent were removed through a posterior colpotomy incision.

Case Reports

Four brief case reports follow, each representing a different and rather distinct type of ectopic pregnancy and illustrating the varied symptomatology that may be seen in this condition. The 4 types represented are: (1) acute rupture with hemoperitoneum; (2) partial rupture, or the so-called "leaking" ectopic; (3) old rupture with hematocele; and (4) the rare unruptured ectopic pregnancy.

Table 13
Analysis of Cases

Admission data	Case 1 Acute Rupture	Case 2 Leaking	Case 3 Hematocele	Case 4 Unruptured
Date	1/5/53	9/26/52	12/10/49	4/6/50
Age	34	34	29	35
Parity	1	1	V	0
Last menstrual period	11/18/52	8/1/52	10/10/49	2/15/50
Symptoms				
Pain	Severe	Cramping	Severe, then cramping	Cramping
Vaginal bleeding	Spotting	Spotting	Spotting	None
Fainting	Yes	No	No	No
Clinical data				
Temperature	99.2 F.	98.6 F.	99.0 F.	99.0 F.
Pulse	100	84	84	84
Blood pressure	118/70	110/60	128/74	130/70
Hemoglobin	9 Gm.	12 Gm.	11 Gm.	12.5 Gm.
White blood cell count	12,900	8,700	11,100	6,050
Pelvic examination	Extremely tender	Slightly tender mass	Tender mass	Tender mass
Operative findings	Rupture	Leaking	Hematocele	Unruptured tubal pregnancy

Case 1

A 34 year old white woman, Para I, was admitted January 5, 1953, because of abdominal pain and fainting. The last menstrual period was November 18, 1952. Slight bleeding started December 18, 1952, and continued for several days. Ten hours before admission she had sudden, severe abdominal pain, and felt as though she was going to faint. Also, she experienced slight shoulder pain. The temperature was 99.2, pulse 100, blood pressure 118 systolic, 70 diastolic. Moderate tenderness was noted throughout the abdomen, with exquisite tenderness in the left lower quadrant. There was extreme pain on manipulation of the cervix. The uterus was normal. A bulge was present on the right side and in the cul-de-sac. The hemoglobin was 9 Gm., and the white blood cell count was 12,900. Laparotomy revealed 1,000 to 1,500 cc. of blood and clots in the abdomen, with a ruptured tubal pregnancy in the proximal portion of the left tube.

Case 2

A 34 year old, white nurse, Para I, was admitted September 26, 1952, because of abdominal pain and vaginal bleeding. The last menstrual period was August 1, 1952. Slight spotting and cramping began September 5, 1952. The patient experienced rather severe pain in the left lower quadrant on September 6, 1952. Pain and bleeding continued, and she passed what she thought was tissue on September 24, 1952. The temperature was 98.6 F., pulse 84, blood pressure 110 systolic, 60 diastolic. There was slight tenderness in the left lower quadrant. Pelvic examination revealed moderate pain on cervical manipulation. The uterus was posterior and normal, and a tender mass, 2 by 5 cm., was palpated on the left. The hemoglobin was 12 Gm. and the white blood cell count 8,700. Dilatation and curettage was done and tissue was reported as menstrual endometrium. The patient had no more pain and was discharged.

This patient was readmitted October 7, 1952, because of abdominal pain. The abdomen was quite tender. The hemoglobin was 12.5 Gm., and the white blood cell count 8,900. At laparotomy she was found to have a pregnancy in the middle of the left tube. There was about 50 cc. of blood in the cul-de-sac with only slight leaking.

Case 3

A 29 year old Negro woman, Para V, was admitted December 10, 1949, because of abdominal pain. The last menstrual period was October 10, 1949. Three weeks before admission she had experienced severe, sharp pain in the lower part of the abdomen. Intermittent pain had continued and defecation was painful. Five days before admission vaginal spotting had appeared and continued. The temperature was 99 F., pulse 84, and blood pressure 128 systolic, 74 diastolic. Moderate tenderness was noted in the lower part of the abdomen. There was slight pain on cervical manipulation, and the uterus was found to be normal in size. A tender, soft mass filled the right side of the pelvis and bulged into the right fornix. The hemoglobin was 11 Gm. and the white blood cell count was 11,000. Laparotomy revealed a 9 by 6 cm. mass on the right, consisting of tube, placental tissue, a 7.5 cm. fetus, blood clots, and omentum.

Case 4

A 35 year old, Negro woman, Para 0, was admitted April 6, 1950, because of abdominal pain. The last menstrual period was February 15, 1950. Cramping abdominal pain had been present for six days. There had been no bleeding. The temperature was 99 F., pulse 84, and blood pressure 130 systolic, 70 diastolic. A firm nontender mass was palpated in the left lower part of the abdomen. The uterus was normal with an 8 by 8 cm. mass left and anterior. On the right was an exquisitely tender mass measuring 3 by 4 cm. The hemoglobin was 12.5 Gm. and the white blood count 6,050. Laparotomy revealed an unruptured tubal pregnancy on the right and an 8 by 8 cm. solitary fibroid tumor on the left.

Summary and Conclusion

1. The recent literature on ectopic pregnancy has been reviewed briefly and the symptoms and signs tabulated.

2. The most common signs and symptoms are abdominal pain (90.3 per cent), vaginal bleeding (82.6 per cent), abdominal tenderness (63.7 per cent) and pelvic tenderness (63.6 per cent).

3. Four cases are briefly reported.

4. It is felt that a carefully taken history, a thorough pelvic examination, and the judicious use of diagnostic aids and procedures, should improve our diagnostic accuracy.

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THERAPEUTIC MISUSE OF SALICYLATE COMPOUNDS WITH RESULTING INTOXICATION

A Report of Two Cases in Infancy

JULIAN F. KEITH, JR., M.D.

WINSTON-SALEM

The treatment of an infant with major drugs gives rise to serious consideration on the part of the attending physician. The use of a drug such as aspirin, however, usually does not cause any great concern. The diagnosis of severe salicylate intoxication in 2 infants admitted to the Pediatric Service of the North Carolina Baptist Hospital within the past few months prompted this report.

Cases of salicylate intoxication secondary to cutaneous absorption of salicylic acid have been reported⁽¹⁾, as have cases of idiosyncrasy to salicylate and intoxication from the

accidental ingestion of large quantities of salicylates. Cases of a more serious nature in the latter usually result from the ingestion of oil of wintergreen, which contains 98 per cent methyl salicylate. The seriousness of these cases may be due to the fact that it is easier to swallow 8 cc. of liquid than it is 12 tablets.

Cases of salicylate intoxication following the injudicious use of aspirin or other salicylate-containing compounds, however, far exceed other causes of salicylism reported in the literature. In the decade 1933-1943 a total of 52 cases of fatal salicylate intoxication were reported to the United States Census Bureau each year. It is to be expected that as many or more cases were not reported, because of the ease with which the diagnosis is missed by the clinician and the pathologist.

Reports of Cases

Case 1

This 5 month old baby girl was referred here by her family physician because of abnormal respirations and cyanosis.

Three weeks prior to admission the infant had had acute coryza. At that time she was treated, without the advice of a physician, with aspirin, castoria, and "fever and cold medicine"* obtained at a local drug store. The informant did not know the amount of the drugs received. The child improved temporarily, but five days later the symptoms recurred. The "fever and cold medicine" was continued in unknown amounts. Five days prior to admission the baby began to "feel hot," acquired a cough, became irritable, and ate poorly. Three days before admission diarrhea developed, and was treated with penicillin. Aspirin, 1½ grains, was prescribed for the fever, and the mother continued to give the "fever and cold medicine," giving approximately 2 to 3 cc. every four hours. The fever continued and the infant's fluid intake was quite poor.

On the day of admission the infant had periods of collapse alternating with periods of extreme irritability. It is known that she received 10 or more of the 1½ grain aspirin tablets in the 24 hours preceding admission, in addition to the "fever and cold medicine." She was seen by the family doctor four hours prior to her admission here. At that time she was comatose, exhibited marked hyperpnea, and was cyanotic in spite of the large air exchange present.

Physical examination

The infant was well nourished and well developed. Periods of depression alternated with periods of marked irritability. The lips and nail beds appeared dusky. The respirations were deep and forceful—rate 80 per minute. There was no acetone odor to the breath. The temperature was 104.6 F. and the pulse 200. The weight was 6.7 kg. The skin was hot and dry. There were no petechiae or ecchymoses. The fontanell was neutral. The left tympanic membrane was dull and reddened. The eyes were sunken

From the Department of Pediatrics, the Bowman Gray School of Medicine of Wake Forest College, and the Pediatric Service of the North Carolina Baptist Hospital, Winston-Salem, North Carolina.

*"Fever and cold medicine." Phenacetin, gr.ii; aspirin, gr. ii in each 4 cc. of syrup of cocillana. Each fluid ounce contained: ethymorphine hydrochloride, gr. 1/4, tincture euphorbia pilulifera, 120 minims, tincture of cocillana, 40 minims, cascarn, gr.viii, menthol, gr. 2/25 and alcohol, 6%.

and dulled. The mucous membranes of the mouth were extremely dry, and the tongue was coated. The pharynx was beefy red; no exudate was noted. The neck was supple. The lungs were clear to percussion and auscultation. An extreme tachycardia was the only cardiac abnormality noted. The remainder of the examination, including a careful neurologic study, was completely negative.

Accessory clinical findings:

The hemoglobin was 10.9 Gm. per 100 cc.; the hematocrit, 32 volumes per 100 cc. The white cell count was 16,000, with a differential count (100 cells) of 41 segmenters, 1 band form, 55 lymphocytes, 3 monocytes. There were hypochromic red cells and adequate platelets. The Kahn and Wassermann tests were negative. The urine was cloudy yellow; the specific gravity, 1.024; the pH, 4.5; albumin, a trace; sugar, negative; acetone, 4 plus; microscopic examination, normal. A pharyngeal culture showed 100 colonies of type III pneumococcus. A stool culture was positive for *Aerobacter* and *Pseudomonas*. The carbon dioxide combining power was 13 milli-equivalents per liter; serum chlorides, 116.5 milli-equivalents per liter, and serum salicylate, 42.7 mg. per 100 cc. An electrocardiogram revealed a sinus tachycardia of 210 and no other abnormalities.

Course in the hospital

A tentative diagnosis of salicylate intoxication was made before any laboratory data were reported. Oxygen was offered immediately and parenteral fluids were started. The infant voided soon after admission. During the first 24 hours she was given 800 cc. of 5 per cent dextrose in water, 150 cc. of normal saline, 66 cc. of 1/6 lactate, and 100 cc. of Ringer's solution. Penicillin and streptomycin were given therapeutically for the obvious infection, and prophylactically because of the possibility of septicemia. Later these were withdrawn and a triple sulfonamide preparation (Terfonyl*) was given because of the diarrhea.

Twelve hours following admission the infant suddenly had a generalized clonic convulsion and turned extremely cyanotic. The temperature then was 102 F. rectally. She was treated with sodium phenobarbital and calcium gluconate, the latter being given because of the possibility of post-acidotic tetany. Within five minutes the convulsion ceased and the color improved. An attempt at a lumbar puncture was unsuccessful.

At 36 hours there was a 1 plus acetoneuria. Because of continued diarrhea, 350 cc. of Ringer's solution and 350 cc. of 5 per cent dextrose in water were continued intravenously. Clear oral fluids, offered frequently and in small amounts, were taken eagerly. In 72 hours the diarrhea had abated, there was a marked decrease in the hyperpnea, and the urine acetone was negative. Parenteral fluids and oxygen were discontinued. The infant remained afebrile, and the remainder of the hospital course was uneventful. At the time of discharge, on the sixth hospital day, physical examination was within normal limits.

It is estimated that during the five days prior to admission the infant had received 1.18 grains per pound per day of aspirin, in addition to what had been given over the preceding three weeks.

Case 2

This 23 month old infant girl was referred to our Pediatric Service by her family physician because of respiratory distress, thought to be secondary to aspiration of vomitus.

The history in this case was extremely unreliable, illustrating well the difficulties often encountered

in obtaining a history of excessive aspirin ingestion, even when it is suspected. It was stated that the child had had a cold with a "runny nose" one week prior to admission, but ate and played well. Approximately 24 hours prior to admission she was said to have "suddenly" become very irritable and was noted to be breathing rapidly. She was unable to stand alone, the cry was hoarse, and she felt hot. She cried most of the night prior to admission, continued to breathe rapidly, and 12 hours before admission had a generalized clonic convulsion lasting from 3 to 5 minutes.

Shortly afterwards she was seen by a physician. The respirations were deep and rapid. Generalized moist rales were noted. The temperature was 100° (axillary). She was given S-R penicillin (Parke-Davis & Co.), and sulfa-sugracillin (Upjohn) was prescribed. Six hours later she was seen by another physician because of the abnormal respirations. The temperature was 98.4 (axillary). She was given aspirin, 128 mg., and phenobarbital. Elixir of Nembutal and Histadyl cough syrup were prescribed. Three hours later she was seen again by the first physician. At that time she was comatose, the respirations were extremely rapid and deep, and the lips appeared dusky. A moderate amount of mucus was removed from the throat, and the patient was referred here.

Direct questioning revealed that the mother had been giving the child one to two aspirin tablets daily since early infancy, "because they seemed to make her quieter." Nothing was known of the amount given in the days immediately prior to the admission. However, it is reasonable to guess that a fairly large amount was given because of the irritability, in the misconception that aspirin has a sedative effect.

Physical examination

This was a well developed, chubby child who was extremely lethargic and weak, responding poorly to stimulation. During the examination there were two convulsive episodes, with symmetrical clonic movements of the extremities, drawing back of the head, and chewing of the tongue. The temperature was 106.4 F., respiration 60, and pulse 240. The blood pressure was 150 systolic, 84 diastolic. The weight was 12.8 Kg.

The skin was extremely hot and dry, with poor turgor. There was slight cyanosis of the lips and nailbeds. The fontanel was closed. The tympanic membranes were dull and reddened bilaterally. There was marked trismus and moderate nuchal rigidity. The respirations were rapid, deep, and forceful. There was increased tubular breathing throughout, and numerous coarse, dry rales in both lung fields. The only cardiac abnormality was the extreme tachycardia. Femoral pulses were present. Abdominal and skeletal examinations were normal. A neurologic examination revealed bilateral, non-fixed, squints, trismus, nuchal rigidity, and hyperactive deep tendon reflexes. The Babinski and Kernig signs were absent.

Accessory clinical findings

The hemoglobin was 9.5 Gm. per 100 cc. The corrected sedimentation rate (Wintrobe) was 8 mm. per hour. The white cell count was 33,000, with a differential count (100 cells) of 53 polymorphonuclears, 16 band forms, 28 lymphocytes, and 3 monocytes. Platelets were adequate. The urine was clear yellow; specific gravity, 1.024; albumin, 1 plus; sugar, negative; acetone, 4 plus. There were 2 to 4 white blood cells and 1 to 2 granular casts per high power field, uncentrifuged. The blood urea nitrogen was 44 mg. per 100 cc., and four days later was 16 mg. per 100 cc. The serum salicylate was 72 mg. per 100 cc. The cerebrospinal fluid was clear. The cerebrospinal fluid pressure was more than 600 mm. of

*Terfonyl, E. R. Squibb & Sons.

Table 1
Comparison of Cases of Salicylism

Case	Dietrick						NCBH		
	Therapeutic			Accidental			Therapeutic		Total
	1	2	3	4	5	6	1	2	8
Age (months)	3	5	5	27	30	36	5	23	
Pyrexia	+	+	+	—	+	—	+	+	6
Abnormal respiration	+	+	+	+	+	+	+	+	8
Depression—Coma	—	+	+	—	—	+	+	+	5
Irritability or convulsion	+	—	—	—	+	—	+	+	4
Emesis	—	—	+	—	+	+	?	?	3
Abdominal pain or distention	+	—	+	—	—	+	—	—	3
Cyanosis	+	—	—	—	—	—	+	+	3
Acetone breath	—	—	—	—	—	+	—	—	1
Dehydration	+	—	+	—	—	—	+	+	4
Thirst	—	—	—	—	—	—	—	—	0
Hemorrhagic tendency	?	—	—	—	—	—	—	—	0
Oliguria	?	?	?	?	?	?	+	+	2
Tachycardia	?	?	?	?	?	?	+	+	2

water, 6 monocytes per millimeter⁽³⁾, and 10 mg. of protein per 100 cc. Cultures of spinal fluid, blood, and urine were negative. Radiographic examination of the skull was negative.

Course in hospital

Immediately following completion of the initial examination the child was placed in oxygen. A right saphenous cutdown was performed and 0.15 mg. of Purodigin* was given slowly, and the pulse slowed to 160. There was no apparent improvement in the child's condition.

Intravenous fluids for the first 18 hours consisted of 1,000 cc. of 5 per cent glucose in water, 125 cc. of 5 per cent glucose in Ringer's solution; 150 cc. of 1/6 molar lactate. Because of the possibility of septicemia, tetracycline was given intravenously, 125 mg. every six hours.

At the end of 18 hours the urine pH was 5.0, and the test for acetone (Acetest) was strongly positive. The temperature was 101.8 F. rectally. During the next 24 hours parenteral fluids were continued in the form of 5 per cent glucose in water, 1,000 cc.; 5 per cent glucose in Ringer's solution, 200 cc.; and 1/6 molar lactate, 50 cc. At 36 hours, 15 cc. of Coca-Cola was offered hourly and increased to 30 cc. after 5 hours.

At the end of 48 hours the respiratory rate was approaching normal. The test for acetone (Acetest) was faintly positive. The child was voiding well, and the temperature was normal. Oral fluids were being taken eagerly and retained well, thus eliminating the need for parenteral fluid therapy. The tetracycline was discontinued at this time and penicillin substituted for the following two days as a prophylactic measure.

At the time of discharge on the fifth hospital day physical examination was within normal limits, and the child appeared perfectly well.

Comment

There is documented evidence that idiosyncrasies to salicylate do occur. However, the type of salicylism most frequently seen in the pediatric age group is a true intoxication. These cases usually represent the

injudicious use of aspirin therapeutically in infants and toddlers. Occasionally, intoxication occurs in the toddler group as a result of the accidental ingestion of oil of wintergreen, which has a methyl salicylate concentration of 98 per cent, 8 cc. of this being equivalent to 12 5-grain tablets.

Diagnosis

A history of the ingestion of salicylate (aspirin or a salicylate containing compound) is the best clue to diagnosis. This is rarely obtained, however, unless the diagnosis is suspected and direct questioning concerning recent treatment is carried out. In a group of cases of salicylate intoxication the only common symptom is the abnormal respiration. Other principal presenting symptoms are mild dehydration, vomiting, periods of stupor alternating with periods of increased irritability, generalized tonic and clonic convulsions, cyanosis associated with the abnormal respiration, (that is, a marked increase in the rate and depth, much like the classic Kussmaul breathing), acetone odor to the breath, abdominal pain, fever, thirst, a hemorrhagic tendency, and in older children, tinnitus.

Dietrick⁽²⁾, in a recent article, presented 3 cases of therapeutic salicylism and 3 cases secondary to the accidental ingestion of aspirin. In each case the initial symptoms or signs were tabulated. In table 1 we use his method of tabulation in comparing his 6 cases with the 2 cases we present. An additional sign, tachycardia, not noted by Die-

*Wyeth Laboratories.

trick, was quite prominent in both our cases, giving rise to suspicion of paroxysmal auricular tachycardia.

It can be stated fairly definitely that the amount of salicylate ingested and the concomitant blood levels which cause clinical symptoms vary widely from patient to patient. However, a serum salicylate level of over 30 mg. per 100 cc. (300 gamma) with accompanying clinical symptoms is sufficient to establish a diagnosis. It is well known that factors other than the amount of salicylate ingested influence the outcome in cases of salicylate intoxication. The increased metabolic demand, with glycogen reserve depletion, a decreased caloric intake, and, in infants particularly, the over-all primary change in total water-electrolyte balance resulting from a febrile illness of several days duration, all tend to cause more severe intoxication than one sees in a well child who accidentally ingests a large amount of aspirin.

Metabolic problems

The metabolic problems associated with salicylate intoxication have been reviewed by Lipman and others⁽³⁾. The changes in the acid-base balance may be briefly summarized as follows:

Phase 1: First there is hyperpnea as a result of the central respiratory stimulation by salicylate. This results in a decreased blood carbon dioxide concentration, with a change in the $\text{HCO}_3/\text{H}_2\text{CO}_3$ ratio toward the alkaline side. The result is a respiratory alkalosis with an increased blood pH, which is compensated by renal excretion of bicarbonate. Thus in this phase one is dealing with the paradox of a lowered blood carbon dioxide with alkalosis, the differential diagnosis of acidosis-alkalosis being determined by the finding of an alkaline urine.

Phase 2: This phase is marked by compensated acidosis. A ketosis develops as the result of interference with carbohydrate metabolism. In infants and toddlers undergoing several days of a febrile illness, the ketosis from salicylism, *per se*, is accentuated by a decreased glycogen reserve and decreased caloric intake. The alkaline reserve, previously lowered by phase 1 activity, is now restored and maintained by the renal and blood buffer mechanisms and the respiratory defense (hyperpnea) of the blood pH.

Phase 3: Unless correction is begun dur-

ing phase 2, a decompensated acidosis with depleted alkali reserve results. In this phase the buffering systems and renal mechanisms are unable to achieve adequate compensation. Result: a decreased blood pH.

Treatment

The treatment depends upon the phase of the intoxication. In cases of accidental ingestion, early gavage with tap water is indicated. Should hyperpnea have supervened this would be a useless procedure. Gavage with sodium bicarbonate is contraindicated, since this may enhance salicylate absorption. When necessary, fluid-electrolyte balance and an adequate carbohydrate intake should be maintained parenterally.

Summary

Two cases of therapeutic salicylate intoxication are presented in detail. The major symptoms and signs are noted. A brief review of the metabolic problems encountered and the principles of therapy are discussed.

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Social reform and eugenics. Since attempts at improving the environment of the people and attempts at improving the stock, are entirely different, there can really be no conflict between social reform and Eugenics. Medicine's attitude towards those critics who suggest a conflict is surely to say: "these things ye ought to do, but not to have left undone the others." What cramps our style again and again is the lure of immediate results. It is a weak strain in human nature. With the Communist it takes the form of a lust for direct action, "and damn the consequences." With the politician it is frequently "ninepence for sixpence" and I hope no one will notice the slight economic fallacy involved. With the sick man it is a bottle of medicine or an operation. What are most of these but expedients of the moment, temporary devices that can only secure transitory and impermanent results; Too often, alas! they are tricks of the charlatan, whose sole motive is to be the chief actor upon the stage. But though the eugenist has no quarrel with the principle underlying social and environmental reforms he is bound to notice that a number of efforts in these directions seem to be of the nature of tinkering.—Horder, L.: *Fifty Years of Medicine*, New York, Philosophical Library, 1954, p. 51.

COMMON SPEECH DEFECTS IN CHILDREN

RODERICK B. ORMANDY, PH.D.
DURHAM

Most of us take our ability to talk for granted. We move our lips, tongue, jaw, and throat muscles rather automatically and unconsciously in order to change the shape of the sound issuing from the vocal folds into recognizable speech. Our ability to perform this complicated act receives little or no notice as we go about our daily living. It is only when our interest is drawn to an individual who cannot talk as well as we that we give thought and consideration to speech.

At present, we are much more tolerant of handicapped people than we have been. The speech-handicapped individual, however, is not yet quite so fortunately regarded. Stuttering, lisping, and baby-talking characters are still ridiculed on radio, television, and in the pages of our comic books. The people who have been able to turn their defect into an asset, who in a sense have over-compensated for their handicap, are indeed the fortunate ones. The usual reaction of the handicapped individual, like that of many of us, to ridicule, punishment, and the social penalties imposed by society, is withdrawal and seclusion. Many speech-defective persons have chosen this way out, and thus society has been deprived of the contributions of a number of capable and intelligent individuals. We know that this does not have to happen. A majority of speech-handicapped people can be helped to achieve speech within the range of normal deviation.

Although statistics vary somewhat, approximately 85 per cent of the speech defective population have what are termed "functional articulation problems"—that is, they did not master the formation of speech sounds, for some reason or other, at the usual time. This group as a whole responds well to speech training, and it is doubtful if there is any other kind of therapy that will, for as small an outlay in terms of time, effort, and money, restore a handicapped person to a normal place in society.

Infantile Speech

Probably the most common speech prob-

lem with which the general practitioner or the pediatrician is confronted is the child who is still talking "baby talk" at an age when most children have good speech articulation. Our first reaction upon seeing such a child is to advise the parents to "let him alone, he'll outgrow it." On the surface this may not seem to be bad advice, because we know that many children do outgrow this type of minor articulatory disturbance. However, we do not know the extent of social penalty and psychologic trauma imposed on the child as he belatedly goes through the transition from poor to adequate speech. Although the exact effect of a speech defect on personality development cannot be measured, it is enlightening to talk with an older child or a young adult who has had the experience of "outgrowing" his speech defect. If we knew that every child would outgrow his defect and that all we had to decide was whether to help him or let him alone, the decision still would be a difficult one. Many children do not show improvement with added maturity, and in these instances the original errors are compounded and solidified by years of habitual use of faulty methods of sound formation. In the case of the child whose speech is not improved by the passage of time, the decision to do nothing precludes the early training that might minimize or eliminate the defect before the problem is further complicated by psychologic factors.

Speech Development

Speech development is an orderly but complicated process. A knowledge of this process is of value not only in determining the severity of the speech defect, but also in planning a program of therapy for the child.

Since the birth cry is our first vocal expression, it might be said that we are using our voices from the moment that we set foot on this earth. Of course, this first cry does not have any specific meaning, but results only from the tightening of the vocal folds over exhaled air as part of a generalized mass tension. The newborn child is not mature enough to learn speech, since his speech organs cannot make the delicate movements required for sound formation, he is unable to listen attentively to the sounds made by those in his environment, and he cannot associate words with meaning. During the first month of life, there is a breakdown in general mass activity, until the focus of movement during

From the Division of Medical Speech Pathology, Duke University School of Medicine and Duke Hospital, Durham, North Carolina.

vocalization is centered in the speech mechanism and is accomplished without simultaneous involvement of other musculature. Although it is still difficult for the mother to recognize the baby's needs from the quality of his crying, the baby does seem to have learned to cry to be picked up, and thus the earliest form of oral communication occurs at this time. In later months there is a great increase in the amount of vocalization and in sounds expressing pleasure, such as chuckling, gurgling, and babbling, as well as in crying. There is a growing tendency to use sound in order to attract attention. Sounds have become differentiated and the mother is now able to tell from the quality of the sound whether the child is angry, afraid, happy, cold, wet, or hungry. The baby's vocalization now has definite communicative value.

Physiologic Readiness for Speech

The most critical factor in speech development in the *first six months* of life is the acquisition of physiologic readiness for speech. Speech is an overlaid function; that is, in talking we utilize muscles and structures whose primary roles are played in such life-sustaining processes as breathing, mastication, and deglutition. During the first six months the steps toward oral language are related chiefly to these vegetative processes, and social factors are less critical and secondary.

One of the physiologic changes that takes place during the first six months of life is a change in breathing. The respiratory rate of the newborn baby is too rapid and irregular to sustain speech. Gradually, during the early months there is a reduction in the breathing rate, and the patterns of breathing become more rhythmical and uniform. In addition to the change in respiratory rate and pattern, the inhalation-exhalation ratio must be changed. During breathing for life, the inhalation phase is slow while the exhalation phase is rapid. In breathing for speech we inhale rapidly and exhale slowly. This reversal is learned by the child in the first six months through crying and vocal play.

The order of development of consonant sounds also show physiologic change. Lip activity is, of course, prominent in sucking, and the lip sounds (p, b, m), which require movements similar to those used in sucking, seem to emerge first. As chewing and spe-

cific tongue activity are incorporated into feeding processes, sounds develop in an order of increasing precision; the simplest of the sounds produced by the blade of the tongue against the gum ridge (t, d, n) follow the lip sounds, the gutturals (k, g, and ng) come next, and finally the most precise of the consonants (s, l, r, z, etc.) emerge.

Sociologic Readiness for Speech

In the *second six months*, babbling increases, and pitch changes and inflections are heard. There is much repetition and some imitation of sounds. There is much variety in sound. This period is a time for acquiring sociologic readiness for speech. Social and emotional pressures achieve more prominence in speech development. The pleasure and enthusiasm evidenced by the adult as he watches the child and listens to his vocalizations are rewarding to the child. Satisfaction of needs in response to vocal signals such as grunts and cries fixes the use of vocalization as an attention-getting device.

The first word is almost always an accident. In babbling, a combination of sounds is produced at a time when an adult happens to hear and projects meaning into the vocalization. The child has already been using sounds as a means of getting attention, and the pleasure shown by the parents on hearing the first "word" will help to insure his continued use of the word by rewarding him for his effort. This acceptance of a word that was not a word at all is extremely important in helping the child acquire social readiness for speech.

The year old child has a vocabulary of one, two, or three words. He is doing a lot of babbling, and there is some jargon—his own private language—which makes no sense to anyone but him.

At *18 months* of age the child has increased his vocabulary to 20 or more words used with meaning. This is the commonly accepted age for jargon, and much of his "talking" consequently will be unintelligible. The *child of 2 years* has a 200-word vocabulary, and speech is being used as a tool as well as a safety valve. The first sentences have appeared, and the child speaks in short simple phrases. Between the *second and third years*, the outstanding changes are in the rapidly growing vocabulary and the use of increasingly complex sentences. Syntax is being learned as well as vocabulary, and there is a

need for plurals and genders. The child is becoming aware of the past and future, and needs more verb forms.

The period of from 3 to 7 years of age is a time for mastering speech pronunciation. The average 2-year-old says 32 per cent of his sounds correctly; the 3-year-old, 63 per cent. The percentage increases to 77 at 4 years, to 88 at 5 years, and to 89 per cent at 6 years.

Between 7 and 8 years of age (girls seem to master articulation before boys) the normal child is articulating all of his sounds correctly. The social use of speech has increased tremendously; language is being used to discuss more abstract ideas, and words do not have to be related to concrete objects. As would be expected, the vocabulary increase has been considerable and grammar is quite good. In short, the child of 7 or 8 years has mastered articulation, and further changes in speech will be in the areas of vocabulary, the expression of increasingly abstract concepts, and grammar.

Some Common Causes of Speech Defects

What can interfere with the rather orderly process of speech development during these 7 or 8 years? We are not considering at this time the physical causes of delay, such as cleft palate, cerebral palsy, hearing defects, and mental retardation, but rather the functional causes. Among the factors which are commonly considered to lead to speech defects are (1) over-solicitude on the part of the parents, (2) parental conflict, (3) poor parent-child relationships, (4) sibling rivalry, (5) emotional shock or conflict, (6) lack of motivation, (7) improper methods used in teaching speech, (8) bilingual conflicts, (9) prolonged illness, especially during the first year, (10) parental neglect, and (11) undue pressure for speech.

Undoubtedly, there are other factors not included on this list. Not all functional speech problems stem from the above factors. Nor does every child who has been subjected to these pressures become defective in speech any more than do all the children who have been exposed to measles contract that disease. We usually find, however, that one factor or more frequently a combination of several, has been operating in the development of the so-called functional articulation defect. It is important that these factors be recognized and identified, and, if possible, removed or at

least alleviated. Excellent progress in improving speech without the benefit of formal training has been made by children when the pressures which precipitated or aggravated the defect have been removed. This fact alone warrants careful and intensive evaluation of the speech-defective child. When it is possible to combine a modified environment conducive to good speech with speech therapy, the child can often be helped to attain speech adequate for the demands of daily living.

Conclusion

It is evident that the speech-defective child needs help. If he is one of those more fortunate individuals who can make his own way—that is, if he is one of those who will outgrow his defect—he needs help to make the road easier. If he is one of the many who will go on year after year with poor speech becoming ingrained in habit, the need is great. *Actually, the only question is not whether or not the child should receive help, but when he should receive this help.* Van Riper has said that “speech is defective when it deviates so far from the normal that (1) it calls attention to itself, (2) it interferes with communication, and (3) it causes its possessor to be maladjusted.” When we use this as a rule of thumb and combine it with our knowledge of normal speech development, we are able to make a fairly good estimate as to the level of speech function in a particular child. The child whose speech is not commensurate with his chronologic age level warrants careful consideration and evaluation before any program of treatment is decided upon. The benefits accruing both to the child and the parents more than outweigh the time and effort involved.

The importance of securing adequate medical treatment, good dental care, surgical rehabilitation, and psychologic guidance cannot be overestimated. The speech therapist wants and seeks the help and advice of specialists in these fields. As a person concerned primarily with language and speech functioning, how the child talks is of prime concern to the therapist, but he or she shares with all parents and friends of children the common desire to help the child have a healthy, useful, and happy life in his community.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

APRIL, 1955

SALK POLIO VACCINE FOUND EFFECTIVE

One of the greatest triumphs in medical history was announced on Tuesday, April 12—very appropriately the tenth anniversary of Franklin D. Roosevelt's death. Dr. Thomas Francis, Jr., who conducted the long testing period for the polio vaccine made under the direction of Dr. Jonas A. Salk of Pittsburgh, reported that it was found to be 80-90 per cent effective against polio, and safe. The tests were made in areas where polio had been most prevalent. In the most gigantic mass test-and-control experiment ever conducted under rigid scientific supervision, involving more than 1,800,000 children, it was shown that the vaccine gives protection against the most severe types of polio virus—those causing paralysis and

death. Dr. Francis estimated that it was ap-
parently 60-70 per cent effective against
type 1 virus, and 90 per cent or more ef-
fective against types 2 and 3. In one area
only 38 children of the vaccinated group
developed paralysis, against 330 of the un-
vaccinated. It is quite possible that some
of the 38 may have been exposed to polio
before the vaccine had had time to give
immunity. The only death in the vaccinated
group was in a child who had his tonsils
removed two days after the second dose of
vaccine. Only 0.4 per cent of the children
suffered minor reactions; none was serious.

In reply to Ed Murrow's question in a
television interview with Drs. Salk, Fran-
cis, and Alan Gregg, president of the Rocke-
feller Foundation, Dr. Salk stated that the
vaccine could be given with impunity to
children with various forms of allergy.

As was to be expected, the Federal
Government's National Institute of Health
lost no time in licensing the sale of the vac-
cine by reputable drug firms. It is estimated
that enough is now in stock to vaccinate
from 20 to 30 million children with three
doses each. Dr. Salk now recommends that
only two doses be given at intervals of two
to four weeks; then seven or eight months
should elapse before a third dose is given
as a booster. He thinks that this time inter-
val will not only allow the present available
supply of vaccine to protect 50 per cent
more children, but that it will also enhance
considerably the immunity conferred by in-
creasing antibody production.

The National Foundation has available
enough vaccine to give approximately 9 mil-
lion children three doses each. If the revised
dosage schedule recommended by Dr. Salk
is followed, the number will be increased to
13,500. This is to be supplied to state health
officers without charge for vaccination upon
parental request:

1. Of children in all communities who are en-
rolled in the first and second grades of public,
private and parochial schools as of Spring,
1955.

2. Of all children who were enrolled in the
first three grades of schools in the 217 test
areas at the time of the 1954 vaccine field trial,
but who did not receive vaccine.

The children in the first and second grades
were selected for the program because of the
high incidence of paralytic poliomyelitis in this
group and because of their accessibility as or-
ganized school units.

In addition to this stockpile of the Na-
tional Foundation, a larger supply will

shortly be made available to physicians through normal channels of distribution by six manufacturers with whom the National Foundation contracted last year for the manufacture of its own supply. These companies, according to a report to physicians dated March 29, are: Cutter Laboratories, Eli Lilly and Company, Parke, Davis & Company, Pitman-Moore Company (Division of Allied Laboratories, Inc.), Sharp & Dohme Division of Merck & Co., Inc., Wyeth Laboratories.

In a television interview with Ed Murrow, Dr. Salk expressed the hope that the present supply of vaccine would be used to protect the age groups most susceptible. The physician can, however, reassure the parents and those under their care that there is no need to become panicky, since it is almost certain that a further supply will be available soon, if not at once. No doubt nearly all physicians will act in accord with the statement made by the Board of Directors of the American Academy of General Practice at the recent Los Angeles meeting of the Academy:

The academy urges family doctors to cooperate to the fullest in obtaining and administering the polio vaccine to patients who desire it. No family should be denied this protection for financial reasons. Though the medical profession will have no control over the cost or supply of the vaccine itself, immunization against polio should be administered on the same basis as other immunization procedures.

The importance of the Salk vaccine is hard to realize just now. It is not too much to hope that polio will become, like diphtheria or typhoid, a medical rarity. Mr. Basil O'Connor, president of the National Foundation for Infantile Paralysis, gave the most impressive evidence of what it may mean when he said that the foundation would probably soon have to seek another objective to sponsor.

* * *

SCARING CONTRIBUTIONS OUT OF PEOPLE

The leading article in the April *Ladies' Home Journal*, by Miss Dorothy Thompson, is very sensible and thought-provoking. In the article, entitled "Are We Scaring Ourselves to Death?" Miss Thompson points out that the voluntary societies formed to fight cancer, tuberculosis, heart disease, polio, and other ills the flesh is heir to have been competing with each other for public contributions. In order to get the money, they have

created "what might be called a philosophy of fear. The effectiveness of the fund-raising campaigns depended on scaring contributions out of checkbooks."

As if to prove Miss Thompson's point, Hal Boyle devoted two of his syndicated Associated Press columns—April 5 and 6—to an obvious attempt to scare his readers into going to a cancer detection center. He answered the hypothetical question, "If I had cancer, wouldn't I at least suspect it?" with the far from reassuring statement: "In many instances, yes; in many, no. Cancer has its warning signals, but often they are masked." Then Mr. Boyles quotes some fear-inspiring statistics from the American Cancer Society—for example, that during the year one American will die of cancer every two minutes; that more than 40 million Americans now living will develop cancer, and 24 million will die of it; that cancer will strike in two of every three families. "It isn't merely a disease of old age, as many people still believe. Half the cancer deaths are in people under 65 years of age. Cancer kills more children between 3 and 15 years old than any other disease." Finally he intimates that in the cancer detection clinics in America — about 280 — is the only real hope of having cancer detected; that while it is desirable to make every physician's office a cancer detection center, many overworked physicians will not take the time to give an apparently healthy person a complete examination.

Such propaganda is calculated to make the non-medical person reading it, even though well balanced emotionally, cancer conscious, even to the point of developing a cancer-phobia—and a genuine cancerphobia is often harder to remove than is an actual cancer.

While cancer is the disease most dreaded, the fear of other diseases is also increased by well meant but unwise attempts to "educate the public." Miss Thompson makes the pertinent suggestion that we should stop "scaring ourselves to death and consider a few encouraging facts," such as the greatly increased life span, the decrease in infant and maternal mortality, the control of such infections as tuberculosis, typhoid, dysentery, diphtheria and others. It is inevitable that there should be an increase in the degenerative diseases, because so many people are living to the time of life at which they naturally may be expected.

As physicians, we can help combat this morbid fear psychology by encouraging our patients to come for periodic examinations and by making these examinations thorough enough to satisfy the patient. Not only may he be reassured if no evidence of cancer is found, but it is often possible to give helpful advice about other conditions which may be discovered in a complete examination.

* * *

THE PROBLEM OF OBESITY

In a comedy popular many years ago, a man who played the role of sheriff brought the greatest laugh from the audience when he said wistfully, "Nobody loves a fat man." An opposing viewpoint was found in a book (title and author forgotten) devoted to the personalities of individuals with various body types. The author stated that the fat man ruled the world, giving as evidence that most politicians and most big business executives were fat men. The reasoning was that the fat man was incapable of great physical activity; hence he sat still and planned how to make others work for him. In order to do so, he cultivated good nature and a persuasive manner—literally charming others into carrying out his wishes.

Whether or not either view is correct, one must admit that excess weight is a great handicap in life. It not only shortens life expectancy, but it puts a greater load on the weight-bearing joints, on the cardiovascular system, on the kidneys, and on the bodily metabolism. The magnitude of the problem of obesity has been emphasized recently by editorials in the *Illinois Medical Journal* for March and in the *Journal of the A.M.A.* for March 26.

Although the favorite "glandular deficiency" explanation of the obese individual is not accepted, more and more physicians realize that the craving for food usually has a psychologic or emotional basis, and that it is just as real as the craving for alcohol. It may also be as difficult to control as is the desire for alcohol. Before undertaking the reduction treatment of an obese patient, the J.A.M.A. editorial advises: "It is wise to find out why the patient wants to reduce, what he really wants out of life, and of what he is afraid." Another bit of good advice was given in the *Illinois Medical Journal*—to caution the patient not to talk about the treatment: "If questioned by the curious,

they were to be casual about the whole thing."

While it is difficult for the average patient to adhere to a diet long enough, most of those who do so experience such a welcome sense of well being and comfort that they are encouraged to persevere in well doing. The amphetamine preparations bear much the same relation to the treatment of obesity that Antabuse does to alcoholism. Neither can be depended upon for indefinite use, but may help to reinforce the victim's too feeble will power, until he can lose enough to become convinced that he is much better off without excessive fat.

* * *

AN ORCHID FOR DR. HENRY BAHNSON

Dr. George Lull's Secretary's Letter for March 28 has an item that should be of interest to all members of the American Medical Association, and of especial interest to North Carolinians: A.M.A. Trustee Tom Murdock is doing well at Johns Hopkins Hospital, after excision of a lower thoracic arteriosclerotic aneurysm of the aorta, which was "about the size of a grapefruit." At the same time an embolus in the left leg was dislodged and removed. Dr. Murdock's many friends throughout the nation will be glad to know that this modest, unassuming, but very efficient gentleman from New England is doing so well after such a formidable operation.

North Carolinians will be particularly interested and gratified to learn that the operation was performed by a native son—Dr. Henry T. Bahnson of Winston-Salem. Henry's brother, Dr. Reid Bahnson, is now practicing internal medicine in Winston-Salem. Both these boys are grandsons of the late Dr. Henry T. Bahnson, who was one of the leading members of the Forsyth County Medical Society, and was president of the Medical Society of the State of North Carolina in 1887.

This JOURNAL extends best wishes to Tom Murdock for a complete recovery, and congratulations to Henry Bahnson for so ably carrying on the family tradition.

Pulmonary tuberculosis cases in adults are more efficient foci of infection than similar lesions in children owing to the fact that a child swallows his respiratory secretions. Philip E. Sartwell, M.D., NTA Transactions, May, 1954.

BULLETIN BOARD

COMING MEETINGS

Medical Society of the State of North Carolina, Annual Meeting—Pinehurst, May 2, 3, and 4.

Duke Medical Postgraduate Courses—Duke Hospital, Durham, June 20-23; aboard the M. S. Stockholm, November 23-December 5.

Southern Pediatric Seminar—Saluda, North Carolina, July 11-16; 18-23.

Student Medical Association, Annual Meeting—Chicago, May 6, 7, and 8.

Trudeau School of Tuberculosis — Trudeau, New York, June 1-29.

American Medical Association, One Hundred and Fourth Annual Meeting—Atlantic City, June 6-10.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

A book by Dr. Louis G. Welt, professor of medicine, University of North Carolina School of Medicine, entitled *Clinical Disorders of Hydration and Acid-Base Equilibrium*, has just been published by Little, Brown and Company, Publishers of Boston and Toronto. The book was published simultaneously in Canada and Great Britain.

Dr. Hubert Ashley Royster, professor of surgery, chairman of the Department of Physiology, New York University College of Medicine, commenting on the book as a significant contribution to medical literature said, "Every physician in every branch of medicine recognizes the importance of salt and water balance and is well aware that many advances have been made in recent years in the study of body fluids . . . [the book] is well written, concise, and represents the carefully considered judgments of one who has had extensive experience in this and related areas. It fills an important gap in medical literature."

* * *

Dr. Hubert Ashley Royster, professor of surgery, emeritus, and former dean of Raleigh Medical Department (1902-10) was recently honored by initiation as an honorary member by the Gamma Chapter of the Alpha Omega Alpha, National Medical Fraternity, of the University of North Carolina Medical School.

Initiation ceremonies took place during the chapter's annual meeting and banquet at which Dr. W. C. George, professor of histology and embryology, University of North Carolina School of Medicine, delivered the principal address, which was entitled "Society, Ideas and Cultural Achievements."

* * *

Dr. John W. Pearson was appointed instructor in the Department of Pharmacology, University of North Carolina School of Medicine, on March 1. Dr. Pearson was born in Dublin, Ireland, and attended Keble College, Oxford, England.

* * *

A research grant for \$9,757 has been awarded Dr. John B. Graham, of Chapel Hill, associate professor of pathology in the Medical School, by the Public Health Service for studies in blood coagulation. This is the third annual renewal of the grant for the study of inhibitory substances in blood clotting. Associated with Dr. Graham in this study are Dr. Mitiyuki Shimizu, a Fulbright Scholar from the University of Tokyo, and Mrs. Emily Barrow of Chapel Hill. Dr. Graham is a native of Goldsboro and a graduate of Davidson College and Cornell University.

The following postgraduate course, offering a well balanced series of six meetings, was planned in cooperation with a committee of doctors from Cleveland and adjoining counties:

Wednesday, April 6

4:00 p.m.—Infertility

7:00 p.m.—The Management of Toxemias of Pregnancy

Dr. Deborah C. Leary, Assistant Professor of Obstetrics and Gynecology, University of North Carolina School of Medicine

Wednesday, April 13

No Meeting—Annual Medical Alumni Day Featuring 75th Anniversary of Medical Education at the University of North Carolina

Wednesday, April 20

4:00 p.m.—Management of Constipation

7:00 p.m.—The Pathologic Physiology of the Gastro-intestinal Tract — The Basis of Symptoms and of Rational Treatment

Dr. Thomas P. Almy, Associate Professor of Medicine, Cornell University Medical College

Wednesday, April 27

4:00 p.m.—Topic to be announced

7:30 p.m.—Newer Developments in Pediatric Therapy

Dr. James G. Hughes, Professor of Pediatrics, University of Tennessee School of Medicine, Memphis, Tennessee

Wednesday, May 4

No Meeting—North Carolina Medical Society Meeting

Wednesday, May 11

4:00 p.m.—The Eye in General Disease

7:00 p.m.—The Treatment of Eye Conditions in General Practice

Dr. Frank C. Winter, Assistant Professor of Surgery (Ophthalmology), University of North Carolina School of Medicine

Wednesday, May 18

4:00 p.m.—Emotional Concomitants of Organic Disease

7:00 p.m.—The Psychosomatic Concept of Certain Organic Diseases

Dr. Kerr L. White, Assistant Professor of Medicine, University of North Carolina School of Medicine

Wednesday, May 25

4:00 p.m.—Some Comments on Auscultation

7:00 p.m.—Some Teaching Cases

Dr. J. Willis Hurst, Cardiology Department, U. S. Naval Hospital, Bethesda, Maryland

All meetings will be held at the Cleveland Springs Country Club.

* * *

Dr. George Ham, professor of psychiatry, attended the meetings of the Group for the Advancement of Psychiatry in Asbury Park, New Jersey, April 1-4. Dr. Ham is a member of the Committee on Medical Education which has just completed a report shortly to be distributed on "The Curriculum of the Psychiatric Residency Training Program." On April 4 he spoke on "Some Aspects of Training Recreation Personnel in Teaching Hospitals," during the afternoon session of the Second Southern Regional Institute on Hospital Recreation in Chapel Hill.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Duke University recently received \$30,000 in American Heart Association grants for five research projects in the field of heart and blood vessel diseases, to be conducted at the University during 1955-1956.

The Duke investigators and their projects are as follows:

Dr. Bodil M. Schmidt-Nielsen: a study of desert animals and of ocean birds to determine the part played by the kidney in maintaining a normal balance of water and heat in the body; Dr. Gerald S. Gordon, research fellow, and Dr. Jack D. Myers: a study of chemical processes in the human heart under different conditions of activity and health; Dr. W. H. Knisley, research fellow under Dr. Eugene A. Stead, Jr., and Dr. Joseph Markee: a study of the effect of various drugs and other forms of stimulation upon the blood vessels of the lung; Dr. Herbert O. Sieker, research fellow under Dr. Stead: how blood circulation is regulated within the smallest blood vessels of different organs and tissues, under various conditions of activity and disease; Dr. Arnold M. Weissler, research fellow under Dr. Myers: research in the blood circulation and chemical activity of the liver.

Dr. Stead, professor and chairman of Duke Medical School's Department of Medicine, is vice chairman of the Heart Association's Scientific Council and a member of the National Advisory Arthritis and Metabolic Diseases Council.

Dr. Myers, national secretary of the American Society of Clinical Investigation, is an established investigator in the circulatory system and heart disease.

* * *

Duke University Medical School has just received its seventh \$30,000 Markle Foundation scholarship, the highest number among medical schools throughout the United States and Canada.

This year's Duke recipient is a Virginian, Dr. William S. Lynn, former intern and resident, who will rejoin the Duke staff as associate in medicine on July 1. The five-year Markle grant becomes effective at that time.

Other Duke medical scientists working under Markle grants are Dr. William J. A. deMaria, assistant professor of pediatrics; Dr. William G. Anlyan, assistant professor of surgery; and Dr. Wayland E. Hull, assistant professor of physiology.

Dr. Ivan W. Brown, Jr., associate professor of surgery, and Dr. George W. Schwert, associate professor of biochemistry, completed training under Markle awards, and Dr. Samuel P. Martin, associate professor of medicine, will finish similar training in June.

Dr. Seymour Korkes, associate professor of biochemistry, was formerly a Markle scholar at New York University.

* * *

Dr. Deryl Hart, Duke University surgeon, has just been awarded a special plaque for his movie contribution to the American College of Surgeons annual program, Cine Clinic.

The plaque is presented as "a symbol of gratitude from the entire profession" for participation in the popular Cine Clinic section of ACS's annual Clinical Congress. The award is made by Davis and Geck, Inc. The 25-minute movie is based on operation for carcinoma of the breast as performed at Duke Hospital. It correlates different types of incisions with the location of the tumor; depicts the technique of operation, with and without skin grafting; and demonstrates postoperative results.

Presented originally at the A.C.S. Congress last November, the Duke film has become part of a nationally circulating medical library.

* * *

Duke Hospital's Physical Therapy Division will double its 1955-56 training program through a \$12,349 federal grant, Miss Helen Kaiser, director, announced here recently.

The grant from the Health, Education and Welfare Department's Vocational Rehabilitation Office will provide additional teaching staff and equipment. This means that Duke will be able to train 24 instead of 12 physical therapy students, beginning with the division's next 15-month course in the fall, Miss Kaiser explained.

In addition to the grant, expansion of the Duke program is aided by scholarship assistance for qualified students through various national organizations, particularly the National Foundation for Infantile Paralysis, the Elks, and the United Cerebral Palsy Association. Scholarship grants also help expand the program by providing graduate assistantships for qualified physical therapists.

DUKE POSTGRADUATE COURSE

A unique postgraduate medical course including 25 hours of formal teaching has been announced by Dr. William M. Nicholson, professor of medicine and director of postgraduate education of the Duke University School of Medicine. The course will be given on the high seas, during a 12-day cruise, beginning at Wilmington, North Carolina, November 23, aboard the M.S. Stockholm, on which the 1954 session of the North Carolina Academy of General Practice was held last October.

From Wilmington, the Stockholm will proceed to Port-au-Prince, in Haiti; Cartagena, on the coast of the Republic of Colombia; the San Blas Islands; Cristobal, in the Canal Zone, Kingston, Jamaica; thence, back to Wilmington.

The cruise will be sponsored by the Duke University School of Medicine and will be operated by the Allen Travel service, Incorporated, 550 Fifth Avenue, New York 36, New York. Dr. Nicholson has suggested that all interested persons write for reservations and literature to the Allen Travel Service. Mr. H. H. Allen, president of the Service, has made several trips to North Carolina for conferences, and will be in Pinehurst during the approaching meeting of the State Medical Society, May 1-4.

The faculty for the 1955 postgraduate course will be composed of Dr. Nicholson, Dr. Wilburt C. Davison, James B. Duke Professor of Pediatrics and Dean of the School of Medicine; Dr. Bayard Carter, professor of obstetrics and gynecology; Dr. Barnes Woodhall, professor of neurosurgery, and Dr. J. Lamar Callaway, professor of dermatology and syphilology.

The tentative program contains many subjects of interest to general practitioners and others in the field of medicine. Credit will be given toward the 150 hours of postgraduate study required every three years of members of the Academy of General Practice. For further medical details address: Director of Postgraduate Education, Duke University School of Medicine, Durham, North Carolina.

Although held under medical supervision with postgraduate education as the primary consideration the cruise will be open to the public. Participating physicians will thus make it possible for all who wish to do so to take this tropical cruise this fall.

Dr. Amos Johnson of Garland, together with Dr. Nicholson, Dr. Davison and others, played an important part in making the preliminary arrangements for the cruise. He was also one of the moving factors in the 1954 meeting of the North Carolina Academy of General Practice.

NORTH CAROLINA MENTAL HYGIENE SOCIETY

The annual meeting of the North Carolina Mental Hygiene Society will be held in Winston-Salem, at the Robert E. Lee Hotel on April 25, beginning at 12:00 noon. Subject of the program will be "The Client, the Clinic, the Community—A Case Presentation," with Dr. John Fowler, of the Durham Child Guidance Clinic acting as moderator of a panel composed of the following participants: Sally White, caseworker of the Department of Public Welfare, staff members of the Child Guidance Clinic, Memorial Hospital, Chapel Hill; Albert Lynch, psychiatric social worker; Dr. Milton Rosenbaum, clinical psychiatrist, and Jane Parker, Department of Public Welfare supervisor. Discussants will be Dr. Lucie Jessner, Department of Psychiatry, Memorial Hospital, and Dr. Robert Barnes, of the Department of Psychiatry, Duke University, and consultant to the Department of Public Welfare.

NALLE CLINIC FOUNDATION

On Friday, April 22, the sixth annual Nalle Clinic Foundation Lectures were presented at the Veterans Recreation Center, Charlotte. At 5:00 p.m. on this date Dr. John M. Beal delivered an address on the topic, "Nutritional Problems of Surgical Patients." Dr. Beal is associate professor of clinical surgery at Cornell University Medical College and attending surgeon of the New York Hospital.

At 8:00 p.m. on the same evening Dr. Joe Vincent Meigs delivered the sixth Brodie C. Nalle Lecture. Dr. Meigs' subject was "Endometriosis." Dr. Meigs is clinical professor of gynecology at Harvard Medical School and Chief of Vincent Memorial Hospital (Gynecological Service of the Massachusetts General Hospital).

NORTH CAROLINA TUBERCULOSIS ASSOCIATION

Twenty-two North Carolina doctors attended the third Tri-State Tuberculosis Case Conference, sponsored by the North Carolina Trudeau Society, the Virginia Trudeau Society, and the West Virginia Trudeau society, held March 13-15 at the Hotel Roanoke, Roanoke, Virginia.

The program, as in the past years, consisted of the presentation of the first 15 consecutive admissions after July 1 (1953) to three tuberculosis hospitals, and a discussion of the cases presented by the participants of the conference.

The institutions invited to present cases were the Catawba Sanatorium of Virginia, the Martinsburg VA Hospital of West Virginia, and the Eastern North Carolina Sanatorium of North Carolina. Dr. H. F. Easom presented the cases for North Carolina.

Serving as moderators for the case presentations were Dr. Edgar W. Davis of Washington, D. C., Julia M. Jones of New York City, and Dr. William B. Tucker of Durham, North Carolina.

* * *

In announcing the state prizes for the 1955 National Employ The Physical Handicapped Essay Contest for eleventh and twelfth grade high school students, which are being donated by the North Carolina Tuberculosis Association and Affiliates, Dr. R. B. C. Franklin, NCTA President, said, "I hope that we can, in sponsoring this contest, make a contribution toward increasing employment opportunities for the handicapped and at the same time emphasize that the tuberculosis patient is part of the physically handicapped group."

BOARD OF MEDICAL EXAMINERS

The Board of Medical Examiners of the State of North Carolina will hold its annual examination at the Sir Walter Hotel, Raleigh, June 20-23, 1955. Applicants for licensure by endorsement of credentials will be interviewed on Tuesday, June 21.

The Board will also meet July 29, at the Mayview Manor, Blowing Rock, North Carolina, at which time applicants for licensure by endorsement will be interviewed.

NORTH CAROLINA STATE BOARD OF HEALTH

North Carolina's home and farm accident death toll mounted to a new high of 795 during the year 1954, it has been revealed by the Accident Prevention Section of the North Carolina State Board of Health.

According to figures based on official death records on file with the state health agency, all types of accidents cost the lives of 2,492 North Carolinians. Of this number 1,143 were classed as motor vehicle accident deaths and 1,349 were under the category of "nonmotor vehicle accident deaths."

Dr. Charles M. Cameron, Jr., the Accident Epidemiologist of the State Board of Health, pointed out that one out of every three accident deaths in the state in 1954 occurred in the home, on the farm, or in a resident institution.

"Official records show that home accidents killed 655 persons, farm accidents took 100 lives, and deaths in resident institutions an additional 40 lives," Dr. Cameron said.

He pointed out that resident institution deaths are classed in the same category as "home" accidents, since the resident institution represents the daily living place for its residents.

Total home, farm and resident institution deaths for 1953 totaled 739 in North Carolina. Deaths in the home showed the largest 1954 increase with a jump from 608 in 1953 to 655 in 1954. Farm deaths increased from 92 to 100 and deaths in resident institutions rose from 39 to 40.

FLORENCE CRITTENTON HOME

On April 19, 1882, the Florence Crittenton program of service to unmarried mothers was begun in the United States. Since that time approximately 5,000 girls annually have found a haven during a difficult period of life. During the time while they await their babies in Crittenton Homes, they participate in a constructive program designed to help them meet their problems better and to become useful citizens when they return to their home communities.

The Crittenton Home of North Carolina was established in Charlotte in February, 1903. The purpose of the home, like that of the other 52 such homes in the United States, is "to shelter and care for the unmarried mother and her child, to give friendship and guidance to the mother during this trying period, and to make the best possible adjustment for both herself and her child when they are ready to leave the home.

During 1954, 243 girls entered the home at Charlotte and remained from three to five months. Of these, 87 per cent were girls whose homes were in North Carolina. The remaining 13 per cent came from eight other states. Twenty-three North Carolina girls went to Florence Crittenton Homes in other states. The homes recognize that often it is wiser for a girl to go to a home in another state.

Of the babies born in the Charlotte home, 50 were kept by their mothers, 77 were relinquished for adoption, 8 are in a hospital or nursery, 47 are in boarding homes, and 2 are deceased.

The 1954 report of services rendered reveals a total of 17,083 days for 243 mothers, and 2,452 days for 184 babies.

FORSYTH COUNTY MEDICAL SOCIETY

The Forsyth County Medical Society held its monthly meeting in Winston-Salem on April 12. Dr. James O. Burke of the Medical College of Virginia spoke on "Gastrointestinal Bleeding."

EDGECOMBE-NASH MEDICAL SOCIETY

The Edgcombe-Nash Medical Society held its regular monthly meeting in Rocky Mount on March 9.

Dr. J. H. Frierson, Jr., who was in charge of the program, presented Dr. Maurice Whittinghill, Department of Zoology, University of North Carolina, as speaker. Dr. Whittingham spoke on the subject, "An Arthritis Study in Nash County."

NEWS NOTES

Dr. E. Reid Bahnson has announced the removal of his office to the Community Store Building, Salem Square, 626 South Main Street, Winston-Salem. His practice is limited to internal medicine.

SOUTHERN PEDIATRIC SEMINAR

Pediatrics, internal medicine, obstetrics, and gynecology will feature the thirty-fifth annual session of the Southern Pediatric Seminar, Saluda, North Carolina. The course will be divided into three one-week sessions and those who wish to attend may come for one, two or three weeks. The first week (July 11-16) and the second week (July 18-23) will be devoted to pediatrics and internal medicine. The third week (July 25-30) will be given over to obstetrics and gynecology.

The faculty of the Seminar consists of men from all over the South who are leaders in their respective fields. About half of them are members of medical school faculties and the other half are men in private practice. In this way there is a well balanced program of the theoretical, the scientific, and the practical.

The seminar is for the general practitioner, and is fully accredited by the American Academy of General Practice for postgraduate instruction. Those desiring further information should write to Dr. D. L. Smith, Registrar, 187 Oakland Avenue, Spartanburg, South Carolina.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

Presidential Inaugural Ceremony to be Broadcast

Highlights of the inauguration of Dr. Elmer Hess of Erie, Pennsylvania, as one hundred and ninth president of the American Medical Association will be broadcast nationwide on Tuesday evening, June 7, during the Association's one hundred and fourth annual meeting. The ceremonies will be held in the Ballroom of Convention Hall at Atlantic City, New Jersey.

An added attraction will be an address by the celebrated Norman Vincent Peale, D.D., pastor of the Marble Collegiate Church of New York City. Dr. Peale will speak on "The Relationship of Religion and Medicine."

Immediately following the formal inaugural ceremony, a reception honoring Dr. Hess will be given in the American room of the Traymore hotel.

More details on time and station of the radio broadcast will be announced later in the *Journal of the American Medical Association*.

A.M.A. to Conduct Nomenclature Institute

The second series of three-day "classes" on the practical applications of the *Standard Nomenclature of Diseases and Operations* in the hospital, doctor's office or medical clinic will be conducted May 23-25 at A.M.A. Headquarters, Chicago. Curriculum will include lectures on the theory, basic principles and installation of the *Nomenclature* and anatomy relating to the topographic section, and practice coding sessions.

Theory will be taught by Adaline C. Hayden, C.R.L., associate editor of *Standard Nomenclature*, A.M.A., and anatomy by Edward T. Thompson, M.D., Chief of Programs Operation, Hospital Facilities, U.S.P.H.S., Washington, D. C.

Medical record librarians and others using the *Nomenclature* in their work or others interested in installing this system may register for the free course by writing to the A.M.A. before May 9.

New Exhibit on Alcoholism

The startling fact that "one out of 16 adult men and women drinkers becomes an alcoholic" is borne out in a new medical exhibit on alcoholism currently in production by the A.A.A.'s Bureau of Exhibits. To be unveiled at the Association's annual meeting in June in Atlantic City, this exhibit discusses the etiology, diagnosis and treatment of the disease, and shows the progressive stages from an occasional drinker to the alcoholic. Particularly stressed are the many procedures employed in treating acute alcoholic intoxication as well as chronic alcoholism, including total abstinence, hospitalization, restoration of fluid balance, and compensation for dietary deficiencies by prescribing high carbohydrate intake, vitamins, and so forth.

In addition, the exhibit points out the ways in which various community organizations such as the county medical society, local welfare and health departments, church organizations, and Alcoholics Anonymous can help the alcoholic resolve his problems. The exhibit, which is being prepared in cooperation with the Committee on Alcoholism of the Council on Mental Health, will be available for showings at state medical society meetings and allied professional gatherings after July 1. Write the Bureau for further information.

Income Tax Manual

If you're still hot under the collar over those troublesome income tax forms, now is the time to write for one of the A.M.A. Law Department's handy reference manuals on income taxes. Titled, "Federal Income Tax Liability of Physicians," this 40-page booklet will help you in figuring out next year's forms. Subjects include business expense deductions, business entertainment expenses, principal new provisions of the 1954 tax code affecting physicians, and tax aspects of a medical partnership. All of the articles were reprinted from the *Journal of the American Medical Association*.

Sex Educational Pamphlets Available Soon

A new series of sex education pamphlets is in the final production stages by the Joint Committee on Health Problems in Education of the National Education Association and the A.M.A. Designed primarily for parents, teachers and youth leaders, some of the pamphlets also are suitable for youngsters, and doctors may want to include them in patient education programs.

The five booklets are: (1) "Parents' Privileges"—for parents of pre-school and early school age children; (2) "A Story About You"—for children, ages nine to 12; (3) "Finding Yourself"—for boys and girls, ages 12-15; (4) "Learning About Love"

—for both sexes, ages 16-20 and (5) "Facts Aren't Enough"—for adults who have responsibility for children or youths which may create a need for an understanding of sex education.

The booklets are scheduled for release about May 15 and may be obtained from either A.M.A.'s Order Department or the NEA headquarters in Washington, D. C. Prices are available on request. The Joint Committee is composed of five physicians and five educators representing the sponsoring organizations.

* * *

Bibliography on Problems of Aging

An annotated bibliography on medical services relating to the aging has been prepared by the Committee on Indigent Care of the A.M.A.'s Council on Medical Service. This up-to-date listing contains references to books, pamphlets and magazine articles, some of which are available to physicians on a loan basis from the Council. The material has been classified according to the various aspects of the aging problem—medical, socio-economic, recreation, housing and general. Copies are available from the Council.

* * *

Addition to A.M.A. Film Library

"The Valiant Heart" is the title of a new film which has been added recently to the library of A.M.A.'s Committee on Medical Motion Pictures. This 27-minute black and white sound film tells the story of an eight-year-old boy suffering from rheumatic fever. The manner in which the doctor, public health nurse, teacher and neighbors rally to help the boy and his family is a dramatic demonstration of the fact that rheumatic fever is a bigger problem than any one person or family can handle.

NATIONAL MULTIPLE SCLEROSIS SOCIETY

The National Multiple Sclerosis Society has established a limited number of fellowships to encourage promising students and scholars to enter the field of research related to multiple sclerosis and the demyelinating diseases.

Fellowship candidates are free to elect a training institution and sponsor of their own choice. However, all candidates are urged to consider a training program looking toward preparation for a career of research in the broad general area of disease.

Applications may be secured by writing to Harold R. Wainerdi, M. D., Medical Director, National Multiple Sclerosis Society, 270 Park Avenue, New York 17, New York.

STUDENT AMERICAN MEDICAL ASSOCIATION

Representatives from three medical schools in North Carolina will attend the Fifth Annual Convention of the Student American Medical Association at the Sherman Hotel, Chicago, Illinois, May 6, 7, and 8.

A high light of the three-day meeting, which includes the official deliberations of the 67 member House of Delegates, will be the first annual banquet, held May 7. Dr. You Chan Yang, Korean ambassador to the U.S., will speak on "Medicine and Diplomacy." The three national winners of the S.A.M.A.—Blue Shield Essay Contest will be announced at this dinner.

John A. Oates, Jr., of Bowman Gray School of Medicine and President of S.A.M.A., invites all members of the medical profession who are in the Chicago vicinity during the Convention to attend the meeting.

Louis J. Regan, M.D., a prominent physician-lawyer and one of the nation's best experts on malpractice, will headline a panel on forensic medicine Saturday afternoon, along with Irving Goldstein, Chicago attorney and leading authority on trial

technique. Mr. Goldstein will also preside as judge at the moot court featuring S.A.M.A. members and representatives of the American Law Student Association.

Forty technical exhibitors, representing the drug and equipment industry, will display their products at the Convention. Some lucky medical student will win a seven-day, all expense paid "Millionaires" Dream Vacation" to Miami Beach, Florida. In addition, several other awards will be made to members who register at the booths in the technical exhibit area.

Sunday's program features the appearance of Nicholas Dallis, M.D., creator of "Rex Morgan, M.D.," the popular newspaper feature. Dr. Dallis will present the story of his cartoon strip and introduce the artist who draws it.

With an expected registration of over 1,000 medical students and interns, the Convention promises to be the largest gathering in the short but successful history of S.A.M.A.

MARKLE FOUNDATION GRANTS

The John and Mary R. Markle Foundation announced that 22 faculty members of medical schools in the United States and Canada had been appointed Scholars in Medical Science, in continuance of a program begun in 1948 to aid doctors planning careers in academic medicine. The Foundation has appropriated \$660,000 toward support of these doctors and their research, to be granted over a five-year period at the rate of \$6,000 annually, to each of the 22 medical schools where they will teach and conduct their research. The scholars were selected from 52 candidates nominated by medical school deans.

Among the 22 scholars whose appointments begin in 1955, and the medical schools that will receive the \$30,000 grants toward their support for the period 1955-60 are:

The Bowman Gray School of Medicine of Wake Forest College, for Alanson Hinman, M.D., instructor in pediatrics and associate in neuropsychiatry; and Duke University School of Medicine, Durham, for William Sanford Lynn, Jr., M.D., associate in medicine, after July 1; currently, Fellow National Research Council, Department of Biochemistry, University of Pennsylvania.

Classified Advertisements

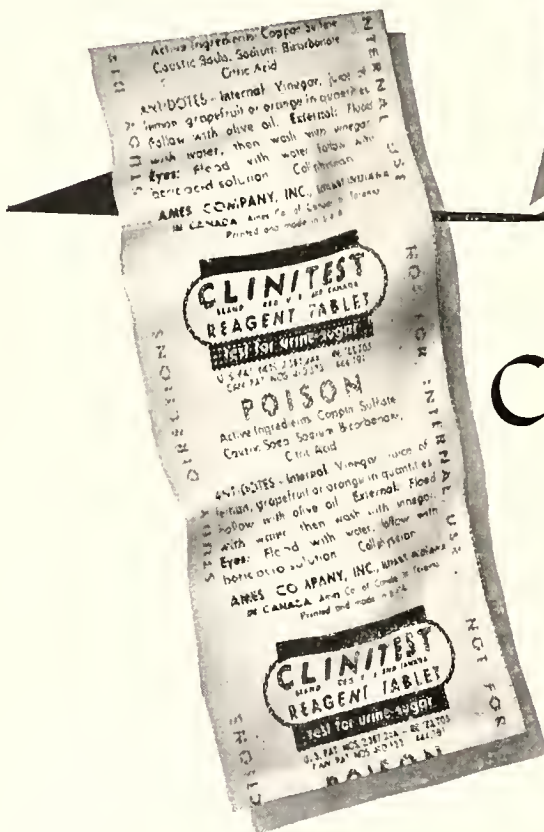
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PAN AMERICAN ASSOCIATION OF OPHTHALMOLOGY

Ophthalmologists of the Western Hemisphere will assemble for the Fifth Pan American Congress of Ophthalmology in Santiago, Chile, January 9 to 14, 1956, under the presidency of Dr. Moacyr E. Alvaro, of Sao Paulo, Brazil.

Thirty or more eye specialists from the United States will take part in the program, which is to include symposiums on the following topics: glaucoma, collagen diseases, strabismus, detachment of the retina, tumors of the eye, plastic surgery, physiopathology and surgery of the crystalline lens, tropical diseases affecting the eye, psychosomatic diseases, visual fields and neuroophthalmology.

AMERICAN COLLEGE OF GASTROENTEROLOGY

The American College of Gastroenterology, in cooperation with the Ames Company of Elkhart, Indiana, takes pleasure in announcing the establishment of the Ames Award Contest for the best papers in gastroenterology.

There will be three classes of awards as follows:
Fellows or residents of gastroenterology: first prize—\$250.00, a certificate of merit, and a 1-year subscription to the *American Journal of Gastroenterology*, official publication of the American College of Gastroenterology; second prize—\$50.00, a certificate of merit, and a 1-year subscription to the *American Journal of Gastroenterology*.

First or second year interns: first prize—\$250.00, a certificate of merit, and a 1-year subscription to the *American Journal of Gastroenterology*; second prize—\$50.00, a certificate of merit, and a 1-year subscription to the *American Journal of Gastroenterology*.

Best paper published: for the best paper published in the *American Journal of Gastroenterology*, during the 12 months ending June 30, 1955, for which no prize has been previously awarded, \$100.00.

All papers submitted must represent original work in gastroenterology, must not have been previously published, except for abstracts or short preliminary reports, and must not have been previously presented at any national meetings.

The contents of the papers can be on clinical or basic science. Clinical papers must not be case reports, but controlled clinical work.

The length of a paper is no criterion for originality or value.

All entries for the 1955 prizes, with the exception of those already published in the *American Journal of Gastroenterology*, must be typewritten in English, double-spaced on one side of the paper and submitted in six copies.

The winning entries will be selected by the Research Committee of the American College of Gastroenterology and the awards will be made at the Annual Convention Banquet of the College, to be held in Chicago, in October, 1955.

All papers selected for awards become the property of the American College of Gastroenterology and the decision of the judges will be final. Should none of the papers submitted meet the standards set by the Committee, the Committee reserves the right to withhold the making of any award.

The recipients of the first prizes will present their paper in person at the annual meeting of the College.

All unpublished entries must be received no later than September 1, 1955, and should be addressed to the Research Committee, American College of Gastroenterology, 33 West 60th Street, New York 23, New York.

TRUDEAU SCHOOL OF TUBERCULOSIS

Despite the closing of the clinical facilities of the Trudeau Sanatorium, the forty-first session of the Trudeau School of Tuberculosis will begin Wednesday, June 1, and continue to June 29.

The staff, facilities and skills of the Trudeau organization laboratories, of the various sanatoria in the Saranac Lake area, and of the practicing tuberculosis specialists of Saranac Lake, will be called upon as in the past to present the program.

Registration will be limited and it is suggested that those planning to attend make early application for enrollment.

The tuition is \$100, payable to the Trudeau School on or before the opening date, June 1, 1955. A few scholarships are available for those individuals who can qualify.

The Trudeau School of Tuberculosis has been approved for training of veterans under Public Laws, and any applicant desiring to obtain veteran's benefits should clear his registration with the Veterans Administration before the session begins.

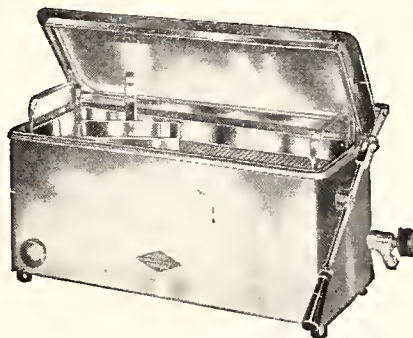
Applications and more detailed information may be obtained from: Secretary, Trudeau School of Tuberculosis, Box 200, Trudeau, New York.

HEBREW MEDICAL JOURNAL

The Hebrew Medical Journal, under the editorship of Moses Einhorn, M.D., of New York, has marked its twenty-seventh year of existence by the issue of two volumes in 1954. Written in Hebrew, with English summaries, the journal has played an important part in the creation of a medical literature and terminology in the language of the Bible.

The editorial office of the Hebrew Medical Journal is at 983 Park Avenue, New York, New York.

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SOCIETY FOR THE PREVENTION OF ASPHYXIAL DEATH, INC.

Thursday evening March 24 the Society for the Prevention of Asphyxial Death Inc. held its twenty-second annual meeting at its headquarters the New York Academy of Sciences, 2 East 63rd Street, New York City.

It was announced that, through the interest and cooperation of the American Medical Association, a much enlarged, sustained and effective program to prevent asphyxiation, was to be activated.

In accordance with the recommendations of the Board of Trustees of the American Medical Association, dated February 18, 1955, the S.P.A.D. will work directly with the Councils and Specialty Sections of the A.M.A. to reduce morbidity (complications) and mortality (deaths) from asphyxia in the total field of medicine.

The Society announced that Dr. Walter Martin, president of the American Medical Association, Dr. Frank Krusen, chairman of the Council on Physical Medicine and Rehabilitation, and Dr. Torald Sollmann, chairman of the Council on Pharmacy and Chemistry, have become members of the Advisory Board of the Society for the Prevention of Asphyxial Death Inc.

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION

The many different and complex problems of industrial hygiene will be thoroughly discussed by specialists before the meeting of the American Industrial Hygiene Association, April 25 to 28, at the 1955 Industrial Health Conference in the Memorial Auditorium, Buffalo, New York.

The four-day sessions will encompass topics of every phase of occupational health and hygiene in the form of panel discussions, seminars, lectures, and demonstrations. This annual exchange of ideas and experiences is considered by most hygienists as a "postgraduate course." Commercial and scientific exhibits will further illustrate the progress in the methods of reducing health hazards and improving health conditions in industry.

The Industrial Health Conference, which ends the following day, April 30, also will include meetings of the American Conference of Governmental Industrial Hygienists, the Industrial Medical Association, the American Association of Industrial Nurses, and the American Association of Industrial Dentists.

DEPARTMENT OF THE ARMY

Major General Silas B. Hays, Army Medical Corps, was nominated today by President Eisenhower to be The Surgeon General of the Army, effective June 1, 1955. General Hays, who has been Deputy Surgeon General for the past four years, succeeds Major General George E. Armstrong, who is scheduled to retire from active duty.

* * *

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Dr. John B. Hozier, a career medical officer in the Commissioned Corps of the Public Health Service, Department of Health, Education, and Welfare, has been named chief of the Office of Health Emergency Planning of the Public Health Service, Surgeon General Leonard A. Scheele has announced.

The Office of Health Emergency Planning is responsible for assuring the carrying out and coordinating of those civil defense responsibilities assigned to the Public Health Service under FCDA Delegation No. 1 to the Department of Health, Education, and Welfare.

U. S. ATOMIC ENERGY COMMISSION

The Atomic Energy Commission stated recently that medical and biological information developed by its scientists on the effects of nuclear radiation, blast, flash burns, and fallout is made public as rapidly as it can be properly evaluated and correlated.

The Commission denied that the medical profession is refused access to the results of its studies of the effects of nuclear explosions on human beings and animals and methods for treating casualties.

It is the Commission's long-standing policy that the American people and medical science should be informed, as rapidly as possible, of the biomedical aspects of atomic energy.

A large amount of information of this nature has been made public, and the Commission's report of February 15 on the effects of high-yield thermonuclear explosions declassified much additional information.

The only biomedical data which remain classified is in piecemeal or incomplete form and therefore inadequate for use by the medical profession. As soon as such information is brought into comprehensive and helpful form it is published, in line with the Commission's established policy.

NATIONAL HEARING WEEK

The twenty-seventh observance of National Hearing Week, May 1-7, has the endorsement of President Eisenhower, eight members of his Cabinet and other federal government officials interested in the problems of an estimated 15 million Americans who have some degree of hearing loss. Governors of many states have issued proclamations or statements calling attention to Hearing Week.

National Hearing Week is sponsored annually by the American Hearing Society, 817 14th St., N. W., Washington 5, D. C. Purpose of the campaign is to inform the public about facilities available to the hard of hearing and to stress the need for expansion of such services.

President of the American Hearing Society is Herschel W. Nisonger, Ohio State University, Columbus, Ohio. Crayton Walker is executive director at national headquarters.

AMERICAN HEARING SOCIETY

Appointment of Crayton Walker, Columbus, Ohio, as executive director of the American Hearing Society has been announced by Herschel W. Nisonger, president of the agency and faculty member at Ohio State University. Mr. Walker, who assumed administrative duties at headquarters March 1, succeeds W. Earl Prosser. The latter resigned to accept a position with the United Health and Welfare Fund of Michigan.

INSTITUTE OF LIFE INSURANCE

The Institute of Life Insurance heart film "A Matter of Time" is receiving nationwide acceptance by television stations and community groups throughout the country.

Filmed in 16 mm. Kodachrome and adapted to black and white, the film has been shown on 335 local TV stations and three networks.

Produced by the Institute of Life Insurance for the Life Insurance Medical Research Fund, "A Matter of Time" is a 15-minute progress report of the accomplishments to date and hopes for the future in medical sciences war on our Number One killer—heart disease. The film is available in 16 mm. color and black and white prints for public service TV and group showings upon application to Association Films, Inc., 347 Madison Avenue, New York 17, New York.

NORTH CAROLINA

Medical Journal



Vol. 16 No. 5
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ROOMING-IN — McBRYDE and DAVISON

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wide clinical range:
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Table 1

Rooming-In 1947-March 15, 1953	
Total number infants	3886
With mother	3525
In nursery	361
Percentage rooming-in	90%

birth⁽⁴⁾ has been followed), and the infant's pharyngeal mucus is greatest. The morning after delivery, the mothers are usually ambulatory and may aid in the care of the infants if they so desire. Very few mothers fail to avail themselves of the opportunity. The nurse or aide is on call when needed, and visits each mother and child at frequent intervals⁽³⁾.

Why Discuss It?

Origin of Nurseries

The answer to the second question—Why discuss it?—is that the younger generation of physicians has never known anything but nurseries for the newborn. Those of us in our sixties had rooming-in automatically; in fact, nearly all of us were born at home, with no alternative to rooming-in. The reasons for the institution of nurseries and for the present reversion to rooming-in, therefore, should be explained.

Prior to 1900, with few exceptions, only the very poor were delivered in hospitals. For example, the Boston Lying-in Hospital was reopened in 1873 "for women during childbirth who from misfortune or otherwise had no home," and for "that class whom maternity makes outcasts."⁽⁵⁾ Rooming-in was considered good enough for these patients, and no American hospital had a newborn

Table 2

Maternal Causes Preventing Rooming-In	
Toxemia	80
Cesarean section	47
Maternal infection	51
U. R. I. (maternal)	31
Essential hypertension	4
Postpartum hemorrhage	5
Miscellaneous	56
Total	274

Table 3

Infant Causes Preventing Rooming-In	
Excessive mucus, etc.	21
Difficult labor	10
Malformations	14
Rh negative mother	19
Birth trauma	7
Infections	8
Miscellaneous	8
Total	87

nursery prior to 1900. However, with the rising percentage of hospital deliveries among the more affluent group of Americans (85 per cent of all American infants are now born in hospitals), the nurses, obstetricians, and possibly even the pediatricians, though there were scarcely 50 of them prior to 1900⁽⁶⁾, decided that the obstetric wards and private floors would be quieter and tidier if the infants were corralled into one room, misnamed a nursery, and brought to the mother only at regular intervals for breast feeding. Next, the evolution of bottle-feeding caused even these four hourly visits of the baby to the mother to cease in many hospitals.

That the affluence of the obstetric patients was a factor in the origin of nurseries is borne out by the fact that in Europe and



Fig. 1



Fig. 2

Asia, where obstetric services are still largely for the poor, there are no nurseries, and babies are placed in bassinets next to their mothers immediately after delivery (see figure 2).

Another factor in the origin of nurseries is that many of the poorer mothers in nineteenth century lying-in hospitals were too weak or too ill to care for their infants, especially at night. This led to the establishment of "night nurseries,"⁽⁵⁾ which still persist in some of the optional rooming-in programs⁽²⁾.

An additional incentive to the establishment of nurseries was the fact that, even up to 1900, many hospitals were pest houses, and puerperal fever, diphtheria, scarlet fever, and so forth, occurred on the wards. It therefore seemed safer to isolate the infants in nurseries.

The return to rooming-in

By 1900, most American hospitals had a "sanitary" nursery for newborn infants, sometimes in charge of the attending pediatrician, but usually with only nursing care. Two generations of American physicians and nurses bragged about the superiority of this plan over the antiquated European and Asian rooming-in. Finally, in 1945, Aldrich, a pediatrician, became concerned with the psychologic aspects of these babies, so carefully isolated in nurseries. He reported that the less nursing and maternal care the infant received, the more he cried⁽⁶⁾. In 1946 Moloney and Montgomery demonstrated, by founding the Cornelian Corner, that both the mother and child profited psychologically from continuous contact with each other; and thus the concept of "rooming-in" was born⁽¹⁾.

This cycle has its amusing side. A small epidemic of diarrhea in the Yokohama nursery for the newborn infants of the wives of Army personnel in 1948 caused Major General J. A. Bethea, the Chief Surgeon of the Far Eastern Command, to abandon nurseries and to establish rooming-in on the suggestion of Lieutenant Colonel Grant Taylor, a member of the Duke pediatric staff, who was on foreign service at the time. In the meantime, however, our military civil government continued to advise the Japanese civilian hospitals to abolish their traditional rooming-in and to build newborn nurseries. The Japanese, knowing that the Army had aban-

doned its own nurseries, were understandably confused, for they had never used anything except rooming-in, on a family scale. A Japanese hospital furnished only the room and bed mat. The family brought in the bed clothes and an hibachi to cook the meals, and if the weather was very cold the mother stayed in bed with the child to keep him warm.

A similar conflict now exists in Taiwan (Formosa). In 1951 some well meaning but misguided American public health nurses persuaded the Free Chinese to change from rooming-in to newborn nurseries in the National University Hospital and also in the provincial hospitals. However, FOA medical and hospital consultants have recently persuaded the authorities to return to rooming-in.

It is an interesting turn of the cycle that one of the reasons for the origin of nurseries was the risk of infection on obstetric wards. Now, with modern asepsis and antisepsis, the wards are much safer than the newborn nursery. The risk of epidemics and the fact that infection is still a main cause of neonatal deaths⁽⁵⁾ have stimulated the return of the infants to their mothers on the wards and in private rooms.

It is, of course, realized that nursery epidemics do not spread from child to child but are carried by the nurse, pediatrician or attendant, who frequently is in contact with the 30 or more babies in the nursery. Rooming-in reduces the number of contacts to the resident, three nurses or aides, and the father and grandparents. The latter are admitted because the infant will be exposed to them as soon as he is taken home. The chief object in advocating rooming-in at Duke Hospital was to reduce the number of infants exposed to any possible carrier. One or two infants may acquire an infection from these contacts, but there can be no wholesale explosive epidemic as sometimes occurs in a nursery in which one attendant can infect all the babies.

What Are the Benefits?

The benefits of rooming-in are numerous:

1. Avoidance of the risk of nursery epidemics already has been mentioned.
2. Self-demand feeding for both breast-fed and bottle-fed infants is greatly facilitated⁽⁹⁾ and the percentage of breast-feeding has been

doubled by rooming-in.⁽³⁾ By having the newborn infant constantly with her, the mother can watch his behavior, learn his hunger rhythm, and feed him whenever he is hungry. Feeding a baby "when he cries" and giving him as much as he wants are preferable to arbitrary schedules and amounts⁽⁹⁾. Some infants cannot learn to nurse during the hurried 20-minute visits to the mother as provided by the routine nursery program.

The best way to encourage breast-feeding habits is to abandon the rigid feeding schedules and amounts which have done so much to regiment infants during the past two generations. Human babies are the only mammals whose feeding habits are regulated by the clock. Dogs, cats, pigs, and other animals nurse whenever hungry, and thrive nutritionally, physiologically and psychologically better than do human beings. Our infants should be given the same opportunity⁽⁹⁾. Feeding and behavior problems in infancy and later life would be greatly reduced, as indicated in the following quotation from an obstetric patient:

My first baby was born under the sanitary, rigid, completely unnatural nursery system. I had plenty of milk but after the fourth day the flow diminished. I learned later that when my baby cried too persistently from hunger in the nursery between his rigid visits to me, the nurses gave him a bottle of sugar and water. As a result, his hunger was partially satisfied, so he did not nurse vigorously and my milk dried up. My baby and I left the hospital almost as strangers. He is now high-strung and nervous. My second child was born in a hospital with rooming-in, and slept by my side from birth, was nursed when he cried, and was cuddled when he wanted it. It was the happiest ten days I have ever had. My second baby and I understood each other, and she is well-adjusted⁽¹⁰⁾.

3. The nursing cost of rooming-in is less than that of maintaining a newborn nursery. Fewer nurses are needed, because the mother almost always shares voluntarily in the infant's care. Prior to rooming-in, the obstetric and newborn services required 11 nurses and 11 aides. Now only eight nurses and seven aides are employed⁽³⁾.

4. Rooming-in provides the most practical way of educating the mother in the care of her infant⁽¹¹⁾. Like a medical or nursing student, she "learns by doing."

5. Rooming-in, as advocated by the Cornelian Corner, also improves the psychologic adjustment of mother and child, enabling them to learn to know each other, and encouraging the formation of sensible maternal

feeding patterns and attitudes⁽³⁾. The infant's close physical contact with his mother, whose warmth and firm clasp he needs, is the first step in forming the proper close child-family relationships. Formerly mothers (as well as fathers) on returning home were afraid to handle their babies, and were bewildered and anxious about such perfectly normal reactions as sneezing or crying for anything from attention and food to dry diapers. That the mother has more confidence in her ability to care for the infant is evidenced by a decrease of about 90 per cent in the telephone calls from new mothers during their first week at home⁽³⁾. It is possible that the incidence in postpartum depressions is decreased by rooming-in, and that parental relaxation is increased⁽¹²⁾.

Physicians now recognize the value of closer child-family relationships with older children also, and instead of limiting the parents of a hospitalized child to visiting hours, the father, as well as the mother, is encouraged to stay with him day and night in order to reduce his reaction to the strange environment and procedures of a hospital⁽¹³⁾. The parents also improve their knowledge of child care by sharing the nursing load, a fact which, during the increasing shortage of nurses, quickly converted the nursing and hospital administration to the desirability of having parents on the pediatric wards.

6. Last but not least is the risk of a fire such as that in England which recently killed fifteen babies in an obstetric nursery⁽¹⁴⁾.

What Do the Mothers Think of It?

What mothers think of rooming-in depends on who does the asking and the form of the question. If a rooming-in enthusiast asks, "Isn't this plan splendid?" the answer is invariably yes. On the other hand, if one of the unconverted says, "This rooming-in ought to be called camping-in; it's terrible, isn't it?" most mothers are too courteous to disagree. Therefore, in order to obtain unbiased answers, printed questionnaires were used and frank comments were solicited. Ninety-five per cent of the 5,000 mothers were favorably impressed with rooming-in, although only a few had been briefed on its advantages before coming to the hospital. The practice was more generally accepted by, and there were fewer complaints from, ward patients. Of the private patients, physicians' wives, especially those who had had

several previous children, were the most resistant. A pediatrician's wife wrote: "It is nice having the baby with me during the day, but I can't sleep if he is with me at night." Another patient, who is an obstetrician, could not see any advantage in the practice. Occasionally there is a mother who is totally unsuited for rooming-in because of tenseness, hysteria, or emotional instability. The usual comment, however, was like the following: "I was very happy to have rooming-in for my baby, I wish that I had had it for my previous ones, and I hope to have it for future babies."⁽³⁾

Why Is It Not More Widely Used?

There are several reasons why rooming-in is not more widely used, the most important of which is the resistance of many obstetricians who have never known anything except nurseries and see no reason for any change, especially one suggested by pediatricians and psychiatrists. This resistance in the main is due to: (1) conservative obstetric traditions (after all, the processes of conception, gestation, and even delivery, have not changed much for thousands of years), and (2) the urge to please the mother. The obstetric house staff is even less favorable to rooming-in than are their chiefs, especially those who were graduated from schools into which rooming-in has not permeated. Some obstetricians are so hostile to the idea that they make no attempt to educate the mothers during pregnancy by encouraging breast-feeding or a warm attitude toward the infant. Usually, the only obstetricians who are keen about rooming-in are those who practice Grantley Dick Read's method of natural childbirth.

Many obstetric nurses oppose rooming-in because they reflect the attitudes of their obstetricians. Most of the nurses on other services are cooperative, however, and do not sabotage rooming-in by prejudicing mothers against it. Some obstetric nurses and obstetricians regard the infants after delivery as nuisances who keep the mother awake and want to be nursed during postpartum examinations. On the other hand, most pediatricians, of necessity if not from altruism, must be interested in both the mother and child—prenatally in order that the infant will be healthy and thus easier to care for, and postnatally so that the infant will be

breast-fed⁽⁹⁾. Some who are not overenthusiastic about rooming-in at first are usually converted when they see its advantages.

How Can It Be Made Popular?

The sixth question—What can be done to increase the popularity of rooming-in?—is the most important of all. Granted that the advantages and safety of the practice outweigh any disadvantages, real or imagined, it is up to its advocates to improve any defects and to spread the gospel as is being done by the Cornelian Corner⁽¹⁾. The greatest advance in rooming-in will come with the training of nurses and aides, so that they will not give mothers conflicting, meddlesome and wrong advice, such as telling a mother "to watch her infant like a hawk for signs of mucus in his throat," and then going off without explaining what to watch for and what to do about it if it appears. At present too many nurses, aides, obstetricians, and even pediatricians, confuse the mothers with well meant but erroneous statements based on preconceived false ideas.

At first nurses wanted an obstetric nurse for the mother, and a pediatric nurse for the child, a chaotic program that involved too many people giving conflicting and confusing instructions. Finally, the nurses were converted to having one nurse or aide constantly available for every five mother-child units, and to stationing her in the area during her entire day. Our most successful aides have been those more than 40 years of age, preferably with children or grandchildren. The older they are, the more milk of human kindness they are likely to have, and the more likely they are to have been born at home, with automatic rooming-in, so that they regard it as natural and not "new fangled." The greatest efforts should be made to orient these aides in the correct care, advice and instruction to be given to the mother. An informative leaflet, "Rooming-in at Duke Hospital—Its Purpose and Value for the Mother and Child," given to the mothers by their clinic or private physicians has increased the understanding and popularity of the method.

Increased efforts are being made to educate the nurses, medical students, interns, residents, and even obstetricians in the technique, objectives and advantages of rooming-

in, and the value of a close mother-child relationship.

Summary

1. The quiet and tidy nursery for newborn infants, an American invention of 1900, is a menace because of the risk of skin infections and diarrhea which may be fatal, and of the possibility of being responsible for some of the psychologic maladjustments in this generation.

2. Compulsory rooming-in is bacteriologically, physiologically and psychologically advantageous for the mother and infant.

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PULMONARY ARTERIOVENOUS ANEURYSM

W. RALPH DEATON, JR., M.D.

and

HERBERT Z. LUND, M.D.

GREENSBORO

Pulmonary arteriovenous aneurysm was first diagnosed at autopsy in 1897⁽¹⁾, clinically in 1939⁽²⁾, and was first treated surgically in 1942⁽³⁾. Since the first reported operation, a pneumonectomy, the number of cases reported has steadily increased, but the latest surveys show that somewhat less than 100 cases have been reported, with only about half of this number being treated surgically.

The familial tendency of the condition has been noted by several reporters. Recently a son and his mother were successfully treated, he for aneurysms in the lingula and left lower lobe, she for one in the right middle lobe.

Case Reports

Case 1

A 25 year old white married man was referred to us by his family physician on February 6, 1954, because of a lesion noted on a routine chest roentgenogram taken at a survey of YMCA participants. The patient knew of the lesion already, stating that he had been discharged from the army in December, 1946, because of a "spot" on his left lung. His records revealed that the lesion had been present when he was inducted into the army in October, 1946, but apparently had been overlooked. It was noted subsequently on a routine review of films, and the patient was immediately hospitalized. Stereoscopic films, tuberculin test, bronchoscopy, and gastric lavage yielded no additional information. He was given a medical discharge without disability, and was told he had a lung scar of no consequence.

Further history revealed that he had had recurrent episodes of epistaxis, frequently to an alarming degree, since childhood. Approximately 11 months prior to being seen, he had had a submucous resection as treatment for the epistaxis, but to no avail. He had always known that his skin, lips, and fingernail beds were a peculiar dusky hue, but disregarded the fact since his mother had the same peculiarity. He had always been short-winded, and could not run up a flight of steps without panting. This symptom had become especially noticeable during the past three years. At the age of 13 he had had two convulsive seizures without known cause. Since that time he had had frequent headaches, easily relieved by aspirin.

Except as noted above, past history and system review were noncontributory. Family history was of interest in that his mother had always had dusky

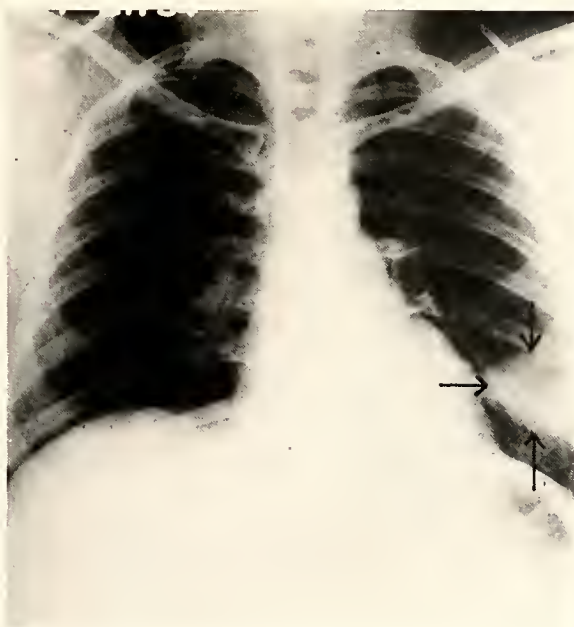


Fig. 1 (Case 1). Posterior-anterior radiographic view of the chest, demonstrating lesion in the left lower lung field.

colored skin. His father, his only sibling, and his child were in excellent health.

Physical Examination: The blood pressure was 130 systolic, 80 diastolic, pulse 96, respiration 18, temperature 99° F. The patient was a well developed, slightly obese young white man. There was an obvious dusky hue to the skin; the mucous membranes and fingernail beds were definitely cyanotic, but the fingers were not clubbed. The subcutaneous veins of the upper chest were quite prominent. Other abnormal findings were dried blood in the nares and a systolic murmur heard only on the left posterior portion of the chest wall, just below the inferior angle of the scapula. This murmur was accentuated with deep inspiration. There was no cardiac murmur.

X-ray examination of the chest (fig. 1) showed a round, slightly oval shadow of increased density, with sharply demarcated borders lying in the left lower lung field. In the lateral view the abnormal shadow was just at the anterior border of the dorsal spine. The lung fields otherwise were not remarkable. The heart and great vessels appeared normal. Fluoroscopy did not add any other information.

Laboratory examination showed a hemoglobin of 15.3 Gm., a red blood cell count of 5,390,000; white blood cells, 9,000 with 59 per cent segmented neutrophils, 3 per cent nonsegmented neutrophils, 3 per cent juveniles, 4 per cent eosinophils, 1 per cent basophils, and 30 per cent lymphocytes. A urinalysis was normal, and the Kahn test was negative.

Hospital course: A diagnosis of congenital pulmonary arteriovenous fistula was made, and excision thereof was recommended to the patient. In view of the progressive dyspnea, he was anxious to accept treatment that offered relief. Thoracotomy was performed on February 12, 1954, through the bed of the resected left seventh rib. When the pleura was opened, a bilobular soft cystic mass, 2 cm. in diameter, was seen at the tip of the lingula (fig. 2). Blood could be seen swirling through this thin-walled cystic structure; slight digital pressure collapsed it



Fig. 2 (Case 1). Photograph of pulmonary arteriovenous aneurysm located at tip of lingular segment of left upper lobe. The walls are actually transparent; the color is imparted by blood in the aneurysm.

completely. No thrill was palpable. Palpation of the lower lobe revealed an ill defined mass, approximately 6 to 7 cm. in diameter, in the very center of the basilar segments. No thrill was palpable. The upper lobe seemed normal. A lower lobectomy was performed, with individual double ligation of the artery and vein (both were greatly enlarged), and end-on suture of the intermediate bronchus. The tip of the lingula was resected with suture ligation of the divided lung. A large catheter was introduced into the pleural cavity through the eighth interspace laterally to provide postoperative drainage. Three units (1,500 cc.) of whole blood were given intravenously during the procedure. The postoperative course was complicated by a persistent right lower lobe atelectasis, which required bronchoscopy to eliminate. Otherwise, he had an uneventful convalescence and was discharged on the eighth postoperative day. At that time his color was much better than it was preoperatively, and he believed that he was less short of breath.

Four months following the operation he reported that he was in better health than he ever had been before, and was now able to do heavy work without any shortness of breath. On examination his skin, lips and fingernail beds were of normal color. The wound was well healed, and no murmur was present. The veins over the upper thorax were much less prominent. X-ray examination of the chest was negative, except for the regenerating seventh rib.

Pathologic report — gross description: Two portions of lung, labeled left lower lobe and lingula portion of the left upper lobe, were received. The former measured 12 by 9 by 6 cm. The hilar vessels were isolated and injected with formalin, producing a pronounced swelling in the center of the lobe. After fixation, the lobe was sectioned and in its mid



Fig. 3 (Case 1). Photograph of sectioned left lower lobe, demonstrating the larger of the 2 aneurysms present. The vascular channel on the left (1) is the vein; the artery (2) is just to the right of the vein, and is much smaller.

portion was found an approximately spherical cavity, measuring 4 cm. in diameter (fig. 3). A branch of the pulmonary artery was traced into the cavity, and a tributary approximately 8 mm. in diameter and 10 cm. long was found to empty into the vein. The lining of the cavity was thin and in places translucent. The second specimen was ovoid, measured 3.5 by 4 by 2 cm., and was covered with pleura except for one cut surface. Projecting on one pleural surface was a trilobed cyst containing blood. Dissection after fixation revealed two vascular channels entering the cystic cavity.

Microscopically, the walls of the aneurysms consisted of a thin layer of fibrous connective tissue cells, associated with fine collagenous fibrils. In the pulmonary tissue were a few small collections of lymphocytes and mononuclear and multinuclear phagocytes. A section of the artery leading into the aneurysm showed a comparatively thin wall of smooth muscle. There was a well developed internal elastic lamina.

Diagnosis: Multiple arteriovenous aneurysms of the left lung.

Case 2

The patient was a 42 year old white multiparous housewife, the mother of the patient described in case 1. Because of her dusky skin and the known familial tendencies of the disease, a roentgenogram of the chest was suggested. This was interpreted as

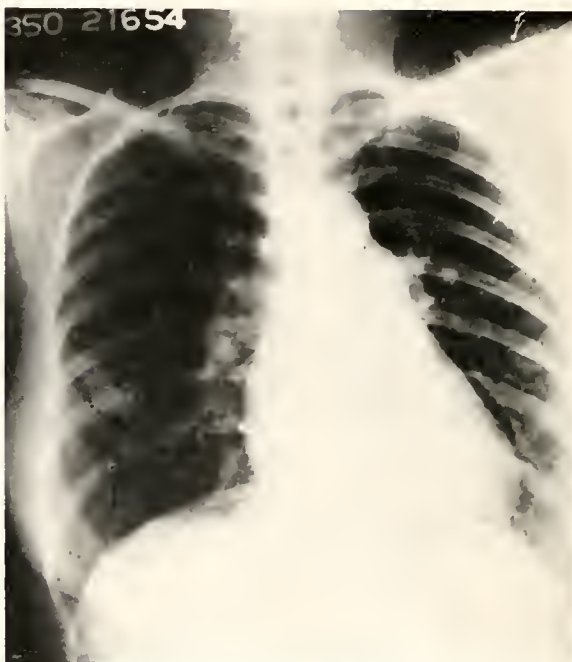


Fig. 4 (Case 2). Posterior-anterior roentgenogram of the chest, demonstrating lesion in right middle lobe lung field. Note fullness in area of the pulmonary conus.

showing "a dense lobulated area in the right lung near the superior border of the middle lobe." The heart was not enlarged, but there was a definite fullness in the region of the pulmonary conus (fig. 4).

Past history revealed that the patient's skin, and particularly her lips, had always been dusky. She had had frequent episodes of epistaxis since childhood, and for the past few years had noted shortness of breath on exertion required to complete a minimum of housework. For several years she had had intermittent pain at the right lateral costal margin.

Past history was of interest only in that she had had a hysterectomy for excessive vaginal bleeding seven years previously. The review of systems was noncontributory.

Family history: The mother and father were alive and in good health. Of 7 siblings, one sister had had a dermoid cyst removed from the mediastinum, another (aged 32) had severe hypertension, and a brother (aged 42) was reported to be cyanotic; a diagnosis of heart disease had been made by his physician, but no x-ray study of the chest had ever been made. (This man now refuses to have a radiologic examination of his chest, stating that he doesn't want to be operated on no matter what his trouble is.) A grandson and a nephew have frequent episodes of epistaxis; examinations, including x-ray studies of the chest, have been negative.

Physical examination: The blood pressure was 140 systolic, 90 diastolic, pulse 84, respirations 16, temperature 98.6 F. The patient was a well developed, short, slightly obese white woman, with slightly dusky skin and lips. The only other positive findings were a systolic murmur in the right nipple line at the fifth interspace, and a precordial systolic murmur; these tended to blend together. However, with deep inspiration, the murmur over the right lung field became much more pronounced.

Laboratory examination: The red blood cell count was 4,760,000, hemoglobin 94 per cent, white blood cell count 10,900, with a differential of 52 segmented neutrophils, 2 per cent eosinophils, 45 per cent lymphocytes, and 3 per cent monocytes. The Kahn test was negative, and urinalysis did not reveal any abnormality. Fluoroscopy contributed no additional information.

In view of the patient's relative youth and long expectancy, excision of the lesion was recommended. She readily agreed, undoubtedly because of her son's satisfactory result, and entered the hospital March 3, 1954. In view of the hilar enlargement on the left, thought probably to be the enlarged pulmonary artery but possibly another aneurysm, pulmonary angiography was performed. The films (fig. 5) showed "excellent visualization of the right and left branches of the pulmonary artery. A direct communication was shown between the shadow previously noted in the right middle lobe and a branch of the right pulmonary artery. No evidence of any other vascular abnormality is noted in either lung." (Fifty cubic centimeters of 70 per cent Diodrast was injected into the left antecubital vein, and 14 by 17 films of the entire chest were taken at two and four seconds after completion of the injection.)

A right thoracotomy was performed March 5 through the bed of the resected seventh rib. At the superior border of the middle lobe was a cystic mass, 3 cm. in diameter, through which blood could be seen swirling (fig. 6). No thrill was palpable. Inspection and palpation of the remainder of the lung did not reveal any abnormality. The middle lobe artery and vein were dissected out, individually doubly ligated, and divided. The bronchus of the middle lobe was divided and the proximal stump closed with end-on interrupted silk sutures. The middle



Fig. 5 (Case 2). Posterior-anterior roentgenogram of the chest made two seconds after injection of contrast media in the left antecubital vein. The increased density of the shadow in the right lung field is quite marked, and the arterial connection is easily traced. The shadow in the left hilar area is demonstrated to be the enlarged pulmonary artery.



Fig. 6 (Case 2). Photograph of pulmonary arteriovenous aneurysm located in the middle lobe, just at the minor fissure.

lobe was then easily removed, with no other suturing necessary. Catheters were introduced high anteriorly and low posteriorly to provide postoperative drainage, and the chest closed in layers using interrupted silk sutures. Two units (1,000 cc.) of whole blood were given as a transfusion during the procedure. Leakage of both blood and air ceased rapidly after the operation, and the catheters were removed on the second postoperative day. The patient was discharged on the sixth postoperative day.

Four months postoperatively she stated that she did all of her housework with no difficulty and felt better than she had in many years; her husband confirmed this report. The color of her lips was much improved, but that of the skin remained unchanged. The incision was well healed. The murmur that had been present over the right middle lobe lung field was absent, and, surprisingly, so was the previously heard cardiac murmur. The chest roentgenogram was interpreted as negative, except for a regenerating right seventh rib.

Pathologic report: Grossly, the specimen consisted of a portion of lung measuring 12 by 10 by 5 cm. covered by pleura on all but one broad cut surface. Projecting from one pleural surface were two side-by-side, thin walled, blood-containing sacs; the larger measured about 2.5 by 2 by 1.5 cm., the other about 1 by 0.5 by 0.5 cm. After fixation in formalin by intravascular injection, the specimen was dissected. The two projecting sacs noted externally were found to communicate, forming an irregular, tortuous channel measuring in all about 4 by 3.5 by 3 cm. Two thin walled branches of the pulmonary artery entered the sacs, but there was only a single communication to the vein. The wall of the sac was thin, with irregular pits. The pulmonary tissue was partially collapsed but otherwise not remarkable.

Microscopically, section of the wall of the aneurysm showed a layer of connective tissue of variable thickness. In places it was only a few strands; in others, about 0.5 mm. thick. The cells were fusiform and were associated with fine fibrils. Some of the nuclei were blunted, resembling those of smooth muscle rather than connective tissue. Section of the artery showed a very thin wall. The internal elastic lamina was preserved. The surrounding pulmonary tissue showed enlargement of some of the alveoli due to breakdown of the intra-alveolar septa. There was focal intra-alveolar hemorrhage.

Diagnosis: Arteriovenous aneurysm of the lung.

Comment

Reviews by Lindskog and others⁽⁴⁾, Yater and others⁽⁵⁾, and Baer and others⁽⁶⁾ have emphasized that pulmonary arteriovenous aneurysm is only a part of a familial generalized tendency for development of arteriovenous connections, or telangiectasia, known as Rendu-Osler-Weber's disease, or hereditary hemorrhagic telangiectasia. Both patients being reported had had recurring epistaxis as well as the pulmonary abnormality; at least two relatives have had episodes of severe epistaxis. It is not unlikely that these two relatives, and perhaps others in the family, will eventually have demonstrable pulmonary arteriovenous aneurysms, for, as Charbon⁽⁷⁾ has shown, minute aneurysms may enlarge and become symptomatic as the patient becomes older.

The delay in establishing the diagnosis in the young man's case is apparently typical, as the disease is rare enough not to be readily thought of as a cause of abnormal pulmonary shadows. In many of the reported cases the diagnosis was not established until operation. The existence of cyanosis, polycythemia, and clubbed digits, with a normal sized heart and an abnormal pulmonary shadow, makes the diagnosis of pulmonary arteriovenous aneurysm quite likely. The concurrent presence of epistaxis, skin or mucosal telangiectasia, or positive family history of these conditions lends certainty to the diagnosis; a thoracic vascular murmur, away from the heart, clinches it. If the murmur is not present or cannot be separated from the heart, the diagnosis can be assured by angiography. Unless there is a question of multiple aneurysms as in case 2, however, angiography is probably not indicated, as complications following the procedure are common.

The complications of pulmonary arteriovenous fistula include rupture (causing either hemothorax or hemoptysis), subacute bacterial endocarditis and cerebral disease. (Symptoms of cerebral anoxia, including headaches, convulsions, and hemiparesis are common, and cerebral abscesses have been reported.) In view of these complications and the excellent results usually achieved by surgery, it is almost universally agreed that establishment of the diagnosis is a positive indication for resection, unless other disease supervenes. Pulmonary resection is much

less hazardous than the complications of pulmonary arteriovenous aneurysm.

Multiple lesions have been present in about one half of the reported cases. Because of this fact and the possibility of existing minute aneurysms enlarging, only the minimal amount of lung tissue consistent with complete removal of the lesion should be removed. Parker⁽⁸⁾ has reported a case wherein, by meticulous dissection of the associated vessels, only the lesion itself was removed; that is certainly the ultimate in conservative resection. In case 1 the large lesion was located exactly in the center of the basal segments; a more conservative resection would have left the superior segment of the lower lobe, but this variation was not considered at the time of operation. The second lesion—incidentally, not seen on the roentgenograms as it overlay the heart on both posterior-anterior and lateral views—was removed with a minimum of lung tissue. This was easily done by virtue of its position at the tip of the lingula. In case 2, it was felt that the technical ease of a middle lobectomy, combined with the small amount of lung tissue in the middle lobe, outweighed any advantages to be gained by performing a segmentectomy or possibly an aneurysmectomy.

The gratifying result in each of the 2 cases reported here is not unusual; in nearly every previously reported case the result has been excellent. This is certainly to be expected with the restoration to normalcy of the pulmonary vascular dynamics by operation.

Summary

Two cases of hereditary hemorrhagic telangiectasia, with formation of pulmonary arteriovenous aneurysm, in a son and his mother, each successfully treated by pulmonary resection, have been reported.

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DUODENAL OBSTRUCTION DUE TO ANNULAR PANCREAS IN A PATIENT WITH CO-EXISTING GASTRIC ULCER

FRANK SOHMER, M.D.*

and

FREDERICK W. GLASS, M.D.

Developmental anomalies of the pancreas are not uncommon. Aberrant pancreatic tissue may occur throughout the gastrointestinal tract, and anatomic variations of the pancreatic ductal system are found frequently. The human pancreas arises in the embryo as two distinct outgrowths of the upper gut, the ventral and dorsal anlagen. The two anlagen normally rotate with the gut, and approximate and fuse at about the seventh week of fetal development to form the pancreas. It has been suggested that the annular anomaly is due to "either a persistence of the left half of the ventral anlage or an excessive growth from the right half of the same anlage"⁽¹⁾. As duodenal rotation occurs, the annular anomaly is formed with the bile duct encircling the duodenum to join the duct of Wirsung⁽²⁾.

The increasing number of reported instances of annular pancreas indicates that this entity probably occurs more frequently than is generally realized. Seventy-four cases were reported through 1952⁽³⁾. Several other case reports have since appeared in the surgical literature, dealing primarily with various operative procedures.

The simultaneous occurrence of peptic ulceration in patients with annular pancreas has also been described. Eight such cases were reported by 1953, in addition to a case in which the patient developed a duodenal ulcer 6 years after resection of an annular pancreas⁽⁴⁾.

The following case is reported because of the uncommon simultaneous findings of annular pancreas and peptic ulcer, and illus-

trates the problem presented by a patient with multiple related or unrelated diseases.

Case Report

A 43 year old white male mechanic and farmer was admitted to the North Carolina Baptist Hospital, November 9, 1950, with complaints of severe pain over the thoracic spine, ataxia, numbness of the extremities, and urinary retention. A complete block of the spinal canal was demonstrated at the eighth thoracic vertebra by myelography. Surgical exploration revealed compression of the spinal cord by an extradural tumor which was removed. The pathologic report was a "malignant tumor arising from mesodermal tissue." The tumor site was irradiated post-operatively. The patient made an excellent functional recovery.

He was readmitted January 26, 1955, complaining of postprandial vomiting for one month. For the preceding five years he had had episodes of "heartburn," which were relieved by antacids. Indigestion and fullness after meals with vague epigastric discomfort had been noted during the preceding year. Six weeks prior to admission the patient began to have anorexia, nausea and vomiting, particularly after eating greasy foods. The vomitus occasionally contained food particles eaten two to three days previously. There had been a 20-pound weight loss in the month preceding admission.

Physical examination was normal except for slight residual symmetrical weakness of the lower extremities and some diminution in position sense.

Accessory clinical findings including urinalysis, hemoglobin, and red and white blood cell counts were normal. Serologic test for syphilis was negative. No abnormality of spinal fluid or pressure dynamics was demonstrable by lumbar puncture. Radiologic examination of the chest, thoracic spine, and abdomen revealed only the operative defect at site of the previous laminectomy. A barium study of the upper gastrointestinal tract revealed the descending duodenum to be obstructed. The proximal duodenum was 8 cm. in diameter. A prepyloric lesser curvature gastric ulcer was also present (fig. 1). Little barium had passed into the small intestine at three and one-half hours.

Course in the hospital

The patient was treated with diet, sedation,

From the Departments of Medicine and Surgery, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

*Trainee, National Institute of Health, U.S. Public Health Service.



Fig. 1. Initial roentgenogram of the stomach and duodenum, showing a lesser curvature gastric obstruction and gastric retention.

and antispasmodics, in addition to nightly gastric aspiration and lavage. Evidence of gastric retention persisted and a repeat x-ray examination after one week showed no change. On February 8, 1955, celiotomy was performed to determine the cause of the duodenal obstruction. The duodenum was found to be dilated proximal to the area which was encircled by the annular pancreas (fig. 2). When the duodenum was opened the lumen of the encircled portion was found to be virtually occluded. The area of induration in the prepyloric region of the stomach was examined, and the ulcer was visualized and biopsied. Pathologic study revealed chronically inflamed gastric tissue consistent with a benign gastric ulcer. A duodenojejunostomy was completed without difficulty. The patient did well and was discharged on the ninth postoperative day.

The patient was asymptomatic at the time of routine follow-up five weeks after the operation. A barium study of the stomach and duodenum no longer revealed the previously described gastric ulcer. Some evidence of dilatation of the second portion of the duodenum persisted without evidence of obstruction. The duodenojejunostomy functioned satisfactorily (fig. 3).

Comment

The variable clinical course of this pancreatic anomaly is illustrated by the fact that in only 15 of 40 cases is any reference made to abdominal signs or symptoms⁽¹²⁾. Many of the remaining reports are of incidental post-mortem findings. Annular pancreas has been found from the age of 2 days to 74 years, although it occurs more often in adults; the ratio of males to female is 4:1. It is difficult to explain the delay in appearance of symptoms.

When the anomalous tissue begins to encroach on the duodenal lumen, upper abdominal discomfort, nausea, and vomiting develop and become intensified as the intestinal obstruction increases. Rarely, the initial symptoms may be due to pancreatitis and the underlying pathologic process go unrecognized until exploration or postmortem examination. In infancy the symptoms suggest severe high intestinal obstruction. Jaundice is rarely present. Other associated congenital abnormalities, including duodenal atresia, have been noted.

Differential diagnosis

The clinical diagnosis is suggested after the radiologic finding of encroachment on the

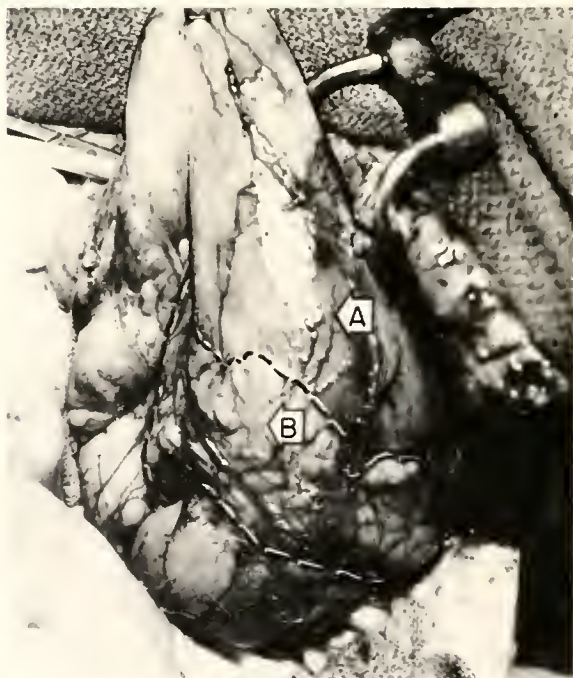


Fig. 2. Operative findings included: A. Proximal dilated duodenum. B. Annular pancreas. C. Normal distal duodenum.



Fig. 3. Roentgenogram of the stomach and duodenum five weeks postoperatively showed persistence of duodenal dilatation. No evidence of obstruction or the previously described gastric ulcer was noted.

lumen of the second portion of the duodenum. In infancy, atresias, congenital bands, anomalous vessels, and malrotation of the gut must be considered in the differentiation.

In adults, adhesions secondary to the regional diseases, primary and metastatic tumors, enteritis, postbulbar ulcers, and parasites must be considered.

Treatment

The development of duodenal obstruction necessitates surgical treatment. This has consisted of resection of the annular portion of the gland or a procedure shunting the obstruction.

At operation the second portion of the duodenum and the head of the pancreas can be mobilized with adequate visualization of the constricting ring of pancreatic tissue.

Excision of the obstructing ring, with or without a plastic procedure to enlarge the constricted portion of the duodenum, has been performed⁽²⁾. This procedure is frequently complicated by pancreatitis, pancreatic fistulas, and recurring obstruction.

Gastrojejunostomy and duodenojejunostomy prevent recurring obstruction and avoid injury to the pancreas and anomalous

ducts often found within the annular tissue. The posterior gastrojejunostomy is less effective, since a relatively long blind pouch of the duodenal loop results. The duodenojejunostomy would seem to be the procedure of choice, since it relieves the duodenal obstruction, prevents a long blind loop, and maintains relatively normal gastric function⁽⁶⁾.

Final diagnosis can be made only at the time of surgical exploration, but awareness of this condition will undoubtedly increase the number of cases recognized.

The authors wish to thank Dr. Frank Johnston, who performed the operation, and Dr. David Cayer for their suggestions in preparing this report.

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SCHOOL PSYCHOLOGICAL CLINICS PART III THE PRESCHOOL PSYCHOLOGICAL CLINIC

JOSEPH R. GRASSI*

WINSTON-SALEM

The early formative years of a child's life markedly affect ensuing social, emotional, and mental adjustments. With careful attention and guidance during these formative years, a child can be better prepared to undertake the numerous life activities which lie ahead. With this thought in mind, educators, child specialists, and parents are becoming more aware of and concerned with the preschool child.

In the not too distant "educational dark ages" little concern was given to preschool preparation. It was felt that a child would be ready for school as soon as he reached the chronologic age as prescribed by law for school admission. Individual differences in

*Director and Assistant Professor of Clinical Psychology, Bowman Gray School of Medicine, Winston-Salem, North Carolina.

mental, physical, emotional, and social developments were completely ignored. The approach today is quite different, primarily because there now is awareness and understanding of the concept of individual differences. Educators recognize that children of the same chronologic age may differ greatly in their mental, emotional, and social make-ups. Parents, too, are becoming more conscious of this concept, although many of them are reluctant to accept it, particularly with respect to their own children. Consequently, progressive school systems place much stress on the importance of individual differences. Numerous lecture sessions, panel discussions, and study groups are sponsored by the schools to help parents gain a better understanding and acceptance of these basic concepts.

The aim of the school today is not simply to disseminate information to parents of pre-school children, but to make a concerted effort to understand each child's assets and limitations as early as possible in the child's school life. With such understanding schools can better provide each child with the type of instruction needed, consistent with his special assets and limitations and commensurate with his native capabilities. Such an approach will eventually eliminate many school failures, and at the same time enable each child to gain maximum school achievement consistent with his ability.

This paper will discuss what constitutes school readiness specifically related to subject matter, rather than the usual social concepts, and how parental guidance during the first school year can assist the child; how a preschool program functions; the nature of preschool psychological evaluations; and finally, the results of two studies of preschool activities.

Academic Readiness

The first grade child is expected to conform to specific classroom procedures, respond to new and varying situations, and achieve according to preestablished criteria. If the child is mature mentally, socially, physically and emotionally, he may well meet these academic demands. On the other hand, immaturity in one or more of these areas may be most detrimental to his academic success.

Reading

Primary emphasis in the first grade is

placed on the acquisition of basic reading skill. Although there are other activities, none is considered as important as reading, because it constitutes our most basic form of communication.

An extremely large number of children experience considerable difficulty in learning to read. Poor readers are found in all grades, and not infrequently in high school and even college. It is not unusual, for example, to find sixth, seventh, and even eighth graders who are unable to read first grade books. It would be a simple matter to attribute this to mental defectiveness. The truth is, however, that many of these readers are not mentally slow; rather they are often above average. For some reason, these children did not "catch on" to reading in the early grades, either because of lack of necessary development in a particular area or because the specific methods used were not consistent with their learning equipment. With early recognition of these defects and special help during the early years, most of them would have been good readers.

In most school systems today, the sight vocabulary method of teaching reading is used. This method provides a child with a small reading vocabulary within a relatively short period, thus satisfying his keen desire to read and at the same time stimulating further reading.

Unfortunately, many children cannot learn to read by this method. Ability to cope with the sight vocabulary method necessitates development in many different areas, such as ability to discriminate between likenesses and differences, capacity to remember what is seen, and ability to reproduce correct images.

In school systems where primary reliance is placed on the so-called sight vocabulary method, the child's success is hampered if memory is weak or faulty. Many normally developing children during the early years show memory weaknesses severe enough to cause considerable difficulty with early reading. These children respond better to methods which place less stress on memory and more on phonetics. It must be kept in mind, however, that most children are not ready to undertake the phonetic approach until they are at least 7 years old mentally. In many instances, children with memory defects have been subjected to the phonetic method with little success; however, the

failures were not due to the method; rather they were related to the child's general mental immaturity.

Visual memory involves not only visualizing that which is seen but also reproducing it correctly. In other words, the image of what is seen must not be so confused that its reproduction is disoriented. Many children who reveal adequate memory development cannot correctly reproduce the objects seen. These are the children who have confused orientation of images; that is, when shown the letter "d" they reproduce it as a "b," or the letter "b" may be reproduced as "p", and later the word "dog" is reproduced as "god." This confusion of orientation often extends to all reading and undermines the child's entire performance. These, of course, are the children who develop specific defects in reading and who must have remedial reading lessons.

Powers of auditory and visual discrimination should be sufficiently developed that children can detect differences in words which look or sound similar, such as "men" and "man," and "mister" and "minister," respectively. The child who lacks good visual discrimination is also confused by letters and words. He cannot see the difference between "b's" and "d's" and "on" and "no," and so forth. His reading is a series of confusions. If he cannot discriminate between similar sounding words, he becomes equally confused when he is presented with phonetics.

The preschool child can be helped to develop his powers of discrimination. Parents should stress the importance of looking for differences and similarities in everyday situations, thus training the child in that direction. With patience and ingenuity, parents can take advantage of numerous daily situations to foster greater discriminatory powers in their children.

During the preschool years, parents should provide children with a wealth of experiences from which to draw. There should be numerous trips to zoos, museums, movies, railroad stations, airports, and so forth. Through these experiences a whole world of reading opens up for the child. In his travels he sees the need for reading in terms of signs on streets, posters, time tables, and menus. The child should be exposed to as many different situations as possible, because he learns through experience. But most important, when a child starts reading

he finds it easier to read about and understand that which is familiar to him.

Visual-motor development

The ability to write is closely related to the child's level of visual-motor development. Visual-motor development implies good coordination between what is visualized and the execution of it—that is, good coordination between hand and eye. The average child does not attain full visual-motor coordination until he is almost 7 years old, and others even later. A child who has poor visual-motor coordination cannot possibly write well no matter how hard he tries. However, except when organic brain disease is the causing factor, visual-motor coordination develops with time and when an adequate level is reached the child writes and writes well.

Children can be helped to achieve visual-motor development through coloring, cutting, drawing, and so forth. One of the most important aspects of a kindergarten program is the tremendous amount of time spent on these activities which foster the development of finer coordination between hand and eye. Yet parents complain that kindergartens devote too much time to "play." Unfortunately, they are unaware of the real contribution such activities make to the child's readiness for school.

Language

Speech should be almost entirely clear when the child starts school. Children with defective speech are greatly handicapped in school because of inability to express themselves, or to make themselves understood. Speech defects not only endanger their academic performance, but often create secondary emotional problems. Parents should have the child's speech checked early enough to allow time for corrective measures, if needed, before he enters school. Too many parents wait until a week before school starts to begin remedial procedures and then are disappointed that the defect cannot be erased overnight.

Mental ability

Developments in the aforementioned areas play an important role in school success; however, there is one factor of even greater importance—mental endowment. Obviously, success in school is highly correlated with intelligence. Retarded or defective children

cannot succeed with first grade work until they are chronologically much older than their peers. The child with average intelligence can be expected to do average work, assuming specific defects are not present, and the superior child can be expected to do a superior job. This is logical. Unfortunately, however, many children who are slightly to severely below average are also expected to do average, and in some cases even superior, work.

We must recognize the fact that children do not mature intellectually at the same rate. Some 6 year old children are mentally 8 or more years old while others are only 4 or even 3. Obviously, the child who is slow in developing should delay starting to school until his development is sufficiently advanced. Thus he will be spared the frustrations of failure and grade repetition, which often cause serious secondary emotional reactions.

Emotional security

Children starting to school should be emotionally stable and secure. The achievement of a child who is insecure and unstable when he enters school will suffer, because emotional problems are barriers between him and his school work.

Parents can help to insure security and stability by satisfying the child's emotional needs. Children need and want acceptance in the form of love, affection, understanding, and attention. If a child has sufficient acceptance he will be secure and stable; if not, he will be most insecure in all his interpersonal relations.

Emotional security does not stem solely from love and affection, but also has the added ingredient of discipline. A child who receives only love and no discipline will be difficult to deal with in school, because school is a discipline situation—it has to be. Children cannot be allowed to set their own individual standards of behavior; they must conform to the policies of the classroom. With a proper mixture of love and discipline the child can be secure and stable and capable of adjusting socially and emotionally to the demands of the school, thereby free to achieve to his maximum capacity.

Parental Guidance in School Activities

Parental guidance and assistance must be a continuous process throughout the child's school years. It is important for them to

understand the child's program, particularly in the first grade, in order to know how to assist, supplement, and guide at home.

Reading

In the first grade, the child is helped to understand words, find purposes in signs and labels and enjoy stories; he is encouraged to use more and more complex stories in expressing his ideas; he is also encouraged to look from left to right and from top to bottom of printed pages or illustrated material; he is further encouraged to differentiate between likenesses and differences. Later he is helped to recognize sounds of letters and words; he is encouraged to work for himself for longer periods of time; he is encouraged to memorize; he is taught to recognize many words on sight; he will recognize and use many words by getting the sense of the sentence or by looking at the illustrated picture. Finally, he will be taught phonetics to help him sound out new words.

These school experiences can be supplemented at home by encouraging children to read. Parents should read to the child as often as possible and set a good example by reading themselves. They should set aside specific time for reading which does not interfere with his other activities. They should provide him with attractive books with clear print, slightly easier than those being used in school. They should show interest in his progress and patiently listen to him read as often as he wishes. The child should be helped with unfamiliar words, so that he will get the meaning of the material; however, he should not be told the same word too often. Above all, the child should receive much praise for his reading efforts.

Arithmetic

In the first grade arithmetic is more appropriately referred to as number work, since it consists of learning to count; learning meanings of values and numbers; learning to work with numbers up to 100; developing an understanding of quantity and relationship by working with numbers and concrete objects—for example, learning that 10 apples can be 6 apples and 4 apples, or 8 apples and 2 apples, and that 55 is 5 tens and 5 ones, and that 25 pieces of paper are fewer than 60 but more than 15; learning several different kinds of measurements and gaining skill in using such instruments as rulers, scales and measuring cups; learning

about coins, the clock, and the calendar, and solving concrete problems.

At home, parents can further this development and understanding in number work by allowing the child to participate in activities which help develop basic number concepts. Allowing the child to help bake a cake, for example, can be helpful. He can be asked to procure a cup of sugar, or a half dozen eggs, or a half pound of butter, thereby learning about quantity. He should also be encouraged to use addresses and telephone numbers and to learn the meaning of such terms as even, bigger, smaller, more, less, and so forth. All these activities will help supplement the number work activities of the school and provide the child with better concepts.

Writing

First grade writing is manuscript writing on paper with lines spaced one inch apart. Manuscript writing is easier than cursive for most children in that it is composed of straight lines and parts of circles. It is continued until the third grade, when cursive writing is introduced. Manuscript writing helps the child with his reading because the letters are printed.

Many children have difficulty in learning to write because their visual-motor coordination is not sufficiently developed. Parents can help at home by encouraging them to color, cut, draw, and write. As these activities foster improvement in visual-motor coordination, writing also improves.

Preschool Clinical Program

With full realization that many children are starting school before they are developmentally prepared, a program was instituted in the Winston-Salem public schools approximately four years ago to determine general and specific readiness for school entrance. It was felt that such a program would serve three major purposes: (1) it would encourage parents of slow developing children to delay school entrance; (2) it would provide schools with objective advance information about each child's capabilities so that he might be placed in a program commensurate with his assets and limitations, and (3) it would reveal specific defects which might respond to corrective activities during the summer months.

Each year during the latter part of April parents are notified by the school, through

individual notices, newspaper notices, and spot radio announcements of the dates for the preschool psychological clinic. Through these mediums, few parents of entering children are missed, particularly since the school principals send a personal individual invitation to each.

On the specified dates the children and mothers attend the child's prospective school, where they are warmly greeted by the principal and teachers. Usually the parents and children gather in the auditorium, where necessary records are completed by the teachers. The children are randomly placed in groups of five to ten, and then led single file by a primary grade teacher to a classroom specifically set up to provide the best possible atmosphere for these first-graders-to-be to take a group mental maturity test.

While the children are taking the test, the parents are asked to read specially prepared literature dealing with school readiness and general preparation for school success and adjustment. Also, at some schools appropriate films are shown or a general orientation talk is given.

In the classroom, the children experience their first real school situation. They find themselves in a room with other children, with a pencil in their hands and paper before them. They are asked to follow the directions of a teacher and experience a situation similar to what they will have in the fall.

After the group testing they are reunited with their mothers and encouraged to visit other parts of the school and get acquainted with "their school." At this time, most of the schools furnish the children simple refreshments, such as ice cream or soft drinks, in an effort to make this first experience a pleasant one which will encourage a positive feeling towards school.

After the results of the group mental maturity test are scored by the teachers, they are forwarded to the school clinic personnel who carefully determine which children need more detailed, thorough study in the diagnostic clinic. The children are then divided into three groups—those whose scores seem to indicate mental immaturity, those whose scores indicate normal development, and those whose scores indicate extremely superior development.

Unless there is a specific reason to the contrary, children who show normal results are

automatically considered ready for regular first grade instruction. The immature and the very superior children are given appointments for the diagnostic clinic.

Prior to the child's clinic visit, the school social worker visits the home, gives necessary preparatory and interpretative information, and makes arrangements for the child and his mother to attend the diagnostic clinic which is held in the child's school during the summer months.

At the clinic, the child is given a complete individual psychological examination, at the conclusion of which a conference is held with the parents. A detailed analysis of the findings is given, along with specific suggestions and recommendations. If the child reveals normal development, he is recommended for placement in a regular program. Numerous children who rate low on the school test reveal their true capabilities on the clinical examination. This, of course, is due to the gross unreliability of group tests of intelligence.

If the child's development is found to be only moderately slow, a modified program of instruction in keeping with his limitations is recommended. If the child is extremely defective, the parents are strongly urged to delay school entrance and to return for follow-up evaluations and counseling—the latter to help provide greater understanding and acceptance of the child's limitations in order to make better plans for his future. It is encouraging that many parents abide by this particular recommendation.

In the event that psychological examination reveals good intelligence but signs of a specific weakness, the parents are encouraged to gain necessary professional assistance as soon as possible. If serious emotional conflicts seem to be present, referral to psychiatric sources is made; if neurologic factors are in evidence, referral to a neurologist is suggested; if speech is significantly defective, visits to a speech teacher are urged. If weaknesses in visual-motor coordination, visual and auditory discrimination, or basic recognition are detected, specific activities are outlined to encourage better development in these areas before school starts. In other words, every effort is made to determine the presence and nature of specific defects and to help the child correct them before school starts. If the defects are,

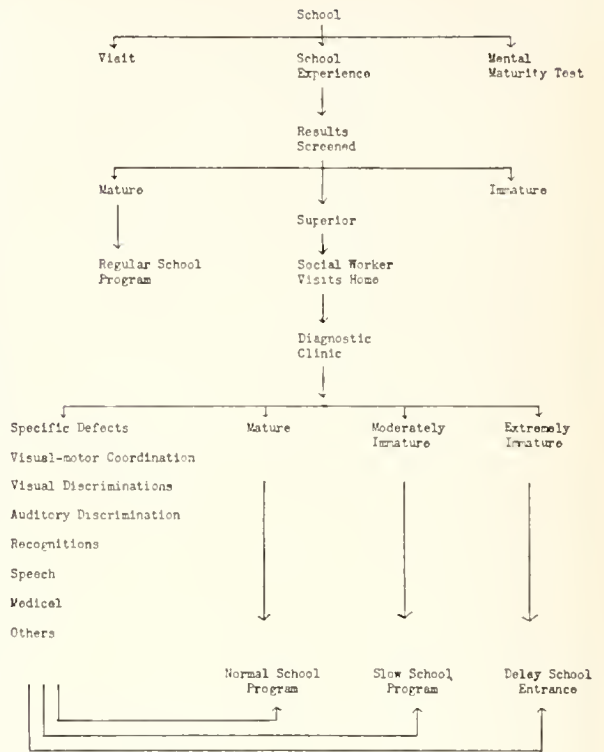


Fig. 1. Schematic diagram of clinic procedure.

sufficiently corrected by school time, it is recommended that he be tried in a normal first grade program; however, often the defect is sufficiently marked to warrant a slower school program, or it may indicate a delay in school entrance so that additional concerted effort may be expended to correct the defects before school entrance the following year.

A written report of the findings of each child is sent to the school before the start of the school year. The report contains a detailed description of the findings of the examination, along with specific recommendations as to the level at which the child can best succeed; what special limitations, if any, are present, and how these can best be coped with in the school setting.

Psychological Evaluation

A copy of the report submitted to the school indicating the results of the psychological examination is reproduced below:

WINSTON-SALEM PUBLIC SCHOOLS PRE-SCHOOL PSYCHOLOGICAL CLINIC SCHOOL READINESS PROFILE

Name
School
Address
.....

PHYSICAL DEVELOPMENT

Weight Height
 Vision
 Hearing
 Cleanliness:
 General Appearance
 Hands
 Teeth
 Bath
 Others
 Physical Handicaps
 General Physical Condition
 SUGGESTIONS:

EMOTIONAL-DEVELOPMENT

(As reported by parents)

Only child..... Youngest..... Oldest.....
 Plays alone..... With Younger..... With Older.....
 Active Play..... Passive Play.....
 Restless..... Overactive.....
 Shy and reserved..... Loud, aggressive.....
 Has a pet..... Attitude towards.....
 Hobbies
 Temper tantrums..... Enuresis
 Fears
 Eating habits
 Sleeping habits
 Discipline: Type used
 Resents Accepts
 Over-protection Rejection
 Sibling relationships
 Other Factors:

MENTAL DEVELOPMENT

Chronological Age Years and Months
 Mental Age Years and Months
 Clinical Mental Quotient
 Cooperation:
 Concentration:
 Vocabulary:
 Memory:
 Judgment:
 Comprehension:
 Reasoning:
 Recognitions:
 Color: Red..... Blue..... Yellow.....
 Green..... Black.....
 Geometric: Square..... Circle.....
 Rectangle..... Triangle.....
 Numbers: 1..... 2..... 3..... 4..... 5.....
 6..... 7..... 8..... 9..... 0.....
 Letters
 Words
 Discriminations:
 Visual: Objects..... Letters..... Words.....
 Auditory: Letters..... Words..... Numbers.....
 Concepts:
 Numbers:4.....7.....9.....
 Coordination:
 Gross
 Visual-Motor: Circle..... Square.....
 Diamond..... Printing..... Writing.....

Speech:

Articulation
 Stuttering
 Stammering

Laterality:

Eye Hand Foot

OTHERS

SUMMARY, CONCLUSIONS,
RECOMMENDATIONS:

The report form is a six-page folder, 5½ by 8½ inches. Page 1 contains identifying information; page 2 gives a brief summary of the physical findings obtained through the preschool physical clinic or from the child's family physician; page 3 provides a brief superficial evaluation of the child's obvious emotional reactions; pages 4 and 5 are related to general mental development and specific areas of development; and the last page gives a brief summary of the data, along with conclusions and specific recommendations.

Pages 2 and 3 are completed by the clinic social workers, the former from medical records and the latter from the interview with the child's parents at the clinic. The remainder of the form is completed by the examining psychologist.

In setting up an adequate psychological examination for preschool readiness, an attempt was made to determine which areas of development were most closely related to first grade success, not only in reading but also in writing and number work. Intensive investigations revealed several areas of high correlation in the three basic areas. First, of course, was the relationship between mental development and general readiness. The relationship of low mental development to lack of school success was obvious; however, that did not seem to be the answer in all situations. Many children with adequate mental endowment were encountering difficulty. Further investigation revealed that other specific areas of development were significant.

It was found that the basic starting point should be an evaluation of the child's development in the areas of *recognition*. This area was broken down into recognition of colors, geometric figures, numbers, letters, and words. It was interesting to note that many children with average mental develop-

ment were weak in one or more of these areas and needed further stimulation before adequate development was attained.

Secondly, it was found that each child should be carefully evaluated as to *visual and auditory discrimination*. This implied discrimination of objects, letters, words, numbers, and so forth, on both auditory and visual levels. Experience has proven that when weaknesses exist in the above areas, success with reading suffers.

Third, the child's *coordination*, both gross and fine, as involved in visual-motor coordination was found to be important. Obviously, this area of function is closely related to achievement in writing. Many well developed children reveal a marked underdevelopment in visual-motor coordination, which is seriously reflected in writing.

Fourth, the child's *speech* was evaluated for possible articulation defects, stuttering, stammering, immaturity, and the like.

Lastly, the child's *laterality* was observed.

It was felt that the above data, along with the emotional and physical information, would be of tremendous help to the teachers in understanding each child at the start of the school year, thus providing him a better opportunity to receive a program of instruction commensurate with his weak areas of development.

Results

During the first two years of the program the children were followed to check on their progress and to determine what norms would best differentiate between readiness and lack of it. The following results were obtained:

Of 112 children, 8 who were predicted to fail advanced to the second grade. Five had mental ages between 4 and 5 years, and 3 had mental ages between 5 and 6 years. These successes were difficult to understand; however, most of these pupils encountered progressively greater difficulty in each succeeding grade, and some of them were finally retained. Nevertheless, the percentage of incorrect prediction, not including those who were eventually retained, was relatively low, being approximately 7 per cent.

On the other hand, prediction of success was more accurate. Of the 112 children only 2 who were predicted to pass actually failed. Three had mental ages of 6 years and 6 months, and the other a mental age of 6 years and 8 months. All had good average

intelligence quotients, and none displayed specific defects of visual-motor coordination, discrimination, and so forth. In each case, however, the child was experiencing emotional problems which were held responsible for school failure. Hence, their lack of success was not related to ability or development. When their emotional problems were corrected, they achieved in accordance with their average abilities. Nevertheless, correct prediction of success was approximately 97 per cent.

In summary, then, the results indicate that if a child obtains a mental age of 6 years or more on an individual psychological examination, correct prediction for school success is 97 per cent. On the other hand, if the results reveal mental development below 6 years, the correct prediction is only 93 per cent. The total over-all prediction accuracy of a psychological examination in determining school readiness was revealed to be approximately 95 per cent.

In another school system,* group tests of mental maturity and reading readiness were given to 138 preschool children. Children who indicated a lack of readiness for school were scheduled for further study by the clinic psychologists. These children were given individual psychological evaluations to determine more specifically areas of underdevelopment or evidence of specific defects.

On the basis of both group and individual test scores, children were grouped homogeneously in one school for comparison with heterogeneously grouped children in a second school, thereby attempting to set up two comparable groups—the former as an experimental group and the latter as a control group. In both groups, children were assigned to three different classrooms with a total enrollment of 26, 34, and 34 per class for the experimental group, and 25, 31, and 32 per class for the control. In order to separate the two groups further, the control group was selected from a school different from that containing the experimental group. The groupings in both schools were made so that there would be equal factors in both, thus providing comparable situations between the two groups.

The tabulation revealed in both the experimental and control groups a total of 70 children who demonstrated sufficient mental development for at least normal school

*Mount Airy, North Carolina

success. Sixty-one children rated below 6 years and 6 months, but above a mental level of 5 years; these are the children who can gain much if special provisions are made for them. Only 5 children rated below a mental age of 5 years, indicating complete lack of readiness for first grade work.

The tabulated results of the Lee-Clark Reading Readiness Group Test indicated 59 children with sufficient development to undertake the reading instruction of the first grade, and 76 children below the minimal standards. The distribution of scores was quite even for both the experimental and control groups, with 31 experimental group and 28 control group children above 1.0 level. Each group contained 38 children below a 1.0 level.

At the conclusion of the school year the Metropolitan Achievement Test was administered to all the children of the experimental and control groups for comparison of levels of academic achievement. The results indicated approximately 10 per cent greater over-all first grade achievement by the experimental group, with 6 per cent more children above a 1.7 level, and 4 per cent less children below 1.6. However, greater differences are revealed between the two groups when reading achievement is considered separately.

In reading achievement, 79.6 per cent of the children in the experimental group rated above 1.7, with only 65 per cent of the control group scoring at the same level. Hence, the experimental group showed 14.6 per cent greater achievement at the higher levels. On the other hand, 15 per cent more children in the control group received scores below 1.7 than did those in the experimental group. Combining the differences (14.6 and 15 per cent) shows a total greater reading achievement by the experimental group of 29.6 per cent. This difference seems directly attributable to the differences between homogeneous and heterogeneous groupings.

It is interesting to note that the children of the lower levels in the experimental group (mental age below 5 years and reading readiness below 0.8) showed much greater achievement when compared with a similar group of children placed heterogeneously. A total of 60 per cent of the lower level children scored over 1.8, and 73 per cent over 1.6, whereas only 22 per cent of the control group scored over 1.8 and 44 per cent over

1.6. It is obvious, therefore, that children of low maturity are better able to learn to read during the first year if they are grouped with children of similar development, and provided a program geared to their level and rate of development. It is interesting to note that children of the low group who did not show adequate signs of achievement were extremely low intellectually, with I.Q. scores of 59, 62, 72, and 54.

Homogeneous vs. heterogeneous grouping

The results of research indicate the advantages of homogeneous over heterogeneous grouping; however, most of the studies show that the dull child profits more from homogeneous grouping than does the average or bright child. Hence, primary emphasis should be directed toward grouping for slow learners.

The advantages of homogeneous grouping is clearly depicted in the results of the program carried on by a junior high school of Los Angeles. A number of ungraded classes ranging in ability from the first and second grades through the sixth were established. The work was similar to that of the regular grades, except that it was geared to the needs and abilities of the children. Individual classes were limited to 20 as nearly as possible. The curriculum included spelling, reading, English, social studies, mathematics, physical education, drafting, and clothes making. The results were excellent, showing exceedingly good progress in certain cases and good improvement in practically all pupils. The program was flexible in that as a child showed sufficient progress he was transferred to a higher group or to a regular class.

In addition to greater school achievement, other factors were evidenced as a result of the program. A marked improvement in the child's attitude toward school resulted, in direct proportion to his accomplishment; there was a marked decrease in the number of disciplinary cases, and the average and bright children of the regular grades were not being held back by the slow learners.

In 1940 children of the New York City schools were placed in ungraded classes as a result of state regulations which stated:

1. Children with intelligence quotient between 50 and 75 and mental ages between 5 and 10, based on adequate individual examination, may be placed in elementary ungraded classes.
2. Children of appropriate age, with intelligence quotients between 50 and 75 and mental ages

between 8 and 12, may be placed in junior high school ungraded classes.

3. Children whose intelligence quotients fall below 50, who are socially adjusted and able to profit by such training, may be placed in low I.Q. classes.

With the recognition of the fact that a child's progress in school will be directly related to the manner in which the school can adopt its activities to conform with his assets and/or limitations, there has been much concern by educators with the concept of homogeneous grouping. Many school systems have experimented with both homogeneous and heterogeneous methods, and the evidence seems to point quite definitely toward homogeneous grouping as the one which produces greater accomplishments. The results of our study definitely bear out the findings of others who have conducted similar experiments.

Summary and Conclusions

1. The activities of a preschool psychological clinic have been presented in detail.
2. The role of the parents and of the school in helping the child gain maximum success and good emotional adjustment has been included.
3. The nature of a psychological evaluation most suited to determine school readiness has been elaborated.
4. The results of two experimental studies with school programs for the starting pupil have been presented.
5. The results of preschool psychological activities have demonstrated their value in helping the school, the child and the parents.

Surgery: It has often been stated in the past that surgery has no future, that it can make no further discoveries or spectacular advances, but that its role remains to polish and perfect what has already been done. Erichsen wrote in 1895: "There cannot always be fresh fields for conquest by the knife. There must be portions of the human frame that will ever remain sacred from its intrusion—at least in the surgeon's hand. The surgeon of the future can scarcely hope to invent new operations, he must be content to modify and perfect those that have been devised by the genius and skill of his predecessors."—Sir Heneage Ogilvie, *The Future of Surgery*, Brit. M.J. 2:1435 (Dec. 18) 1954.

* * *

To a large extent this business of noise is one more example of the conflict between man and the machines that he had made. The question here, as in other and more vital directions, is whether he is going to be "done in" by the machine or is he going to control it? Science has made us noisy but science has also given us remedies to subdue noise, if we will use them.—Horder, L.: *Fifty Years of Medicine*, New York, Philosophical Library, 1954, p. 57.

HEAD INJURIES IN CHILDREN; FALLS FROM MOVING AUTOMOBILES

LUKE M. KITAHATA, M.D.

EBEN ALEXANDER, JR., M.D.

and

COURTLAND H. DAVIS, JR., M.D.

WINSTON-SALEM

Much of the prolongation of human life in the United States during the past 50 years is directly attributable to the reduction in the infectious diseases of infancy. The reduction in morbidity in this age group is as impressive as is the reduction in mortality⁽¹⁾.

While advances are being made in the survival of infants and children, suffering and death from accidents, particularly automobile accidents, in the younger age group, has shown a constant increase⁽²⁾. Law enforcement officers and others deeply concerned about this problem have done much to keep down the accident rate among infants and children in spite of the constantly increasing number of motor vehicles on city streets and rural highways. The establishment of laws protecting school children boarding and leaving school buses, the provision of safety zones for traffic officers in busy school areas, and many similar measures have been effective. Undoubtedly the mortality rate would be higher except for these efforts by many individuals and organizations in the United States.

Concern with the high accident toll among infants and children has prompted a study of those injuries, particularly head injuries, resulting from falls from the rear door of four-door automobiles in which the vehicles were in motion. The number of cases is small (only 12), but the incidence of potentially serious injury is great. This fact is all the more important, since this type of accident is almost completely preventable.

Material

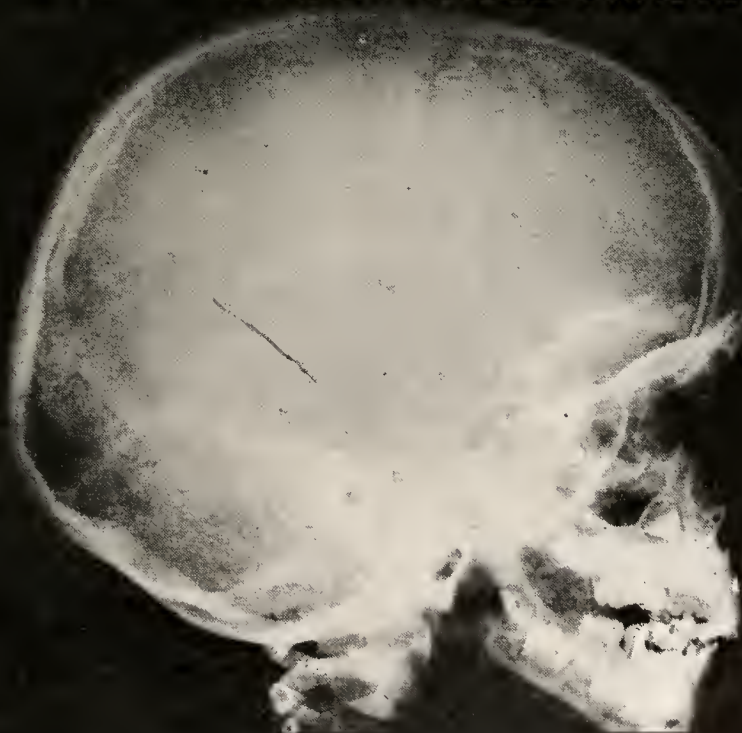
The period covered by this survey is January, 1949, through December, 1954. Cases were selected on one basis only—namely, that the child was injured by falling from the rear door of a forward moving vehicle. These cases represent a small percentage of the head injuries in children seen in hos-

From the Division of Neurosurgery, the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

FALLS FROM MOVING CAR



LINEAR SKULL FRACTURE



pitals, and do not include any whose injuries were considered so inconsequential as not to require examination by a neurosurgeon or admission to a hospital. We have personal knowledge of the children of two physicians who have fallen from the rear door of moving vehicles. In each case the injuries were not serious, and the children were not examined by any other physician.

Although a large percentage of the patients with serious head injuries admitted to the local hospital come from a distance of more than 30 miles, none of the 12 children here considered was injured at a location more than 12 miles from the hospital, except for one child who came a distance of 30 miles, and another who was on his way to the outpatient department of this hospital. This would indicate that injuries of this general nature without serious sequelae occur with reasonable frequency throughout the state and country. Children who might have been killed instantly by such an accident would obviously not have been seen by a physician in a hospital.

The 12 cases surveyed included 9 boys and 3 girls. All the children were between the ages of 2½ and 7 years.

Location and Extent of Injuries

The location of the head injuries varied considerably. Four of the linear fractures were in the parietal bone, 1 was a basal fracture extending into the squamous portion of the temporal bone, and 1 was occipital. A total of 6 patients suffered fractures of the skull. The only compound depressed fracture was in the parieto-occipital region, and only 2 patients required head operations other than sutures for scalp lacerations.

In terms of brain damage, the injuries to this group of children were not usually severe, although many of the children were unconscious for a few minutes or a few hours. Only 1 patient remained unconscious for as long as five days. Considering, however, that 6 of the 12 patients had demonstrable fractures of the skull, one might anticipate a significant incidence of more severe intra-cranial injuries in a larger group of cases. Extradural hematomas are relatively rare in children⁽³⁾, but cerebral contusion, laceration, and subdural hematomas occur with about the same frequency as in older individuals. One might justifiably conclude, therefore, that the potential for serious brain damage is present in injuries oc-

Table 1
Analysis of Cases

Case	Make	Door Hinge	Adult in Back Seat	Fracture of Skull
1.	1950 Mercury	Front	No	Yes
2.	1946 Dodge	Back	No	Yes
3.	1938 Chevrolet	Back	No	No
4.	1940 Plymouth	Back	Yes	No
5.	1940 Chrysler	Back	Yes	No
6.	1947 Plymouth	Back	No	No
7.	1940 Hudson	Back	No	Yes
8.	1946 Studebaker	Back	Yes	Yes
9.	1938 Chevrolet	Back	No	Yes
10.	1947 Chrysler	Back	No	Yes
11.	1948 DeSota	Back	No	No
12.	1946 Ford	Back	No	No
13.	1948 Plymouth	Back	Yes	Yes
14.	1941 Chrysler	Back	Yes	Yes
15.	1946 Dodge	Back	No	Yes

curing in the manner described in this paper, but that this group of patients has been particularly fortunate in escaping most of the serious late sequelae of such injuries.

There were no fractures of bones elsewhere in the body, nor were there any serious visceral injuries. Contusions, abrasions, and lacerations were present in all cases, and were moderately severe. One girl fell from a moving car, was apparently struck by another car behind the one from which she fell, and suffered a severe tear of the right brachial plexus which resulted in permanent disability.

All patients except those noted above were treated conservatively, and spinal punctures were not done. One patient still has partial aphasia. All 12 patients have been followed up within the past two months.

An effort to determine the relationship between the severity of the injury and the speed at which the vehicle was said to have been moving resulted in no definite conclusions. The speeds varied from 15 to 50 miles per hour. It is of interest, however, that of the 3 children who fell from an automobile while it was moving at 15 miles an hour, none was noted to be unconscious, although all suffered from linear skull fractures and had multiple lacerations and contusions. The duration of unconsciousness in the remaining patients was so varied that it could not be correlated with the speed of the vehicle.

Prevention

The effectiveness of various methods of preventing this type of injury was studied. In three instances an adult was riding in

the back seat of the automobile when the child accidentally opened the door and fell out. In none did the adult prevent the child from falling from the opened door. It is evident, therefore, that the presence of an adult in the back seat of a four-door car with a child of the age group $2\frac{1}{2}$ to 7 years is not sufficient to prevent such injuries as have been described.

In all cases the type of car in which the child was riding was established, and it was determined that in 11 cases the rear door opened in such a direction that it would be pulled outward by the wind resulting from the forward motion of the car. In only one instance did the rear door open in the opposite direction. All the vehicles in which the door was hinged at the back were manufactured prior to 1948. Automobile manufacturers should note that this simple change in body design can be expected to obviate this type of accident. Statistical studies now in progress may suggest other modifications which will prevent injuries to children and adults⁽⁴⁾.

The only way to prevent children from falling from the rear doors of forward moving cars is by locking the door so that it cannot be opened from the inside. This can be done either by removing the inner handle of the back door, disconnecting the handles from the door frames, installing electrically controlled door locks which can be operated from the dashboard of the car, or by applying outside locks.

Summary

1. A series of 12 cases of head injuries occurring when children fell from the rear door of forward moving vehicles has been reviewed.

2. The majority of the children were boys, and all were between the ages of $2\frac{1}{2}$ and 7 years.

3. Fractures of the skull occurred in 6 of the 12 patients.

4. Methods of preventing this potentially serious injury have been discussed. In three instances the presence of an adult in the rear seat of the car did not prevent the child from falling out. A change in the body design of most cars since 1949, however, has almost completely eliminated this type of accidents in cars manufactured since that date.

Addendum

Since this paper was submitted, 3 additional cases have come to our attention, and have been added to table 1 (cases 13, 14, and 15). Cases 13 and 14 occurred during the period covered by the study. Both patients were boys, aged 3 and 4 respectively; both fell from the rear door of a forward moving car despite the presence of an adult on the back seat. One car (case 13) was a 1948 Plymouth, the other (case 14), a 1941 Chrysler; in both, the rear door was hinged at the back. Both patients suffered skull fractures requiring surgery. One (case 13) had a basal fracture extending into the temporal bone, with extra-dural and subdural hematomas. The other (case 14) had an occipital fracture and cerebral contusion.

The third case occurred in February, 1955. The patient, a 3 year old boy, had an occipital skull fracture and cerebral contusion, and in addition suffered a fracture of the right wrist. The car was a 1946 Dodge.

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SIMPLE HIGH LIGATION IN SELECTED CASES OF INDIRECT INGUINAL HERNIA

ALFRED T. HAMILTON, M.D., F.A.C.S.

RALEIGH

In the natural course of scientific endeavor, there tends to occur an increasing complexity of technique. As failures of the simpler procedures accumulate, new and more involved methods evolve and, reasonably enough, tend to become routine. This trend would appear desirable as a means of salvaging failures, but it often ignores the successes of the original simpler undertaking. It behooves us from time to time to reappraise our routines, particularly those most often employed, and attempt to revert to the less complex maneuvers, when the more involved ones are needless or contraindicated.

Application of this principle to the repair of hernia emphasizes the fact that, in addition to high ligation and excision of the sac, the more or less routine technique of transversalis fascia repair, including a McVay type suture and transplantation of the inguinal cord, either by the Massini or the Halsted technique, has evolved. This paper

is offered not as a criticism of such maneuvers in the special cases in which they are indicated, but as a plea for a simpler type of repair when those procedures are not only unnecessary but are almost certainly harmful.

I speak of the healthy male in whom there develops, in his 'teens or twenties, a typical indirect inguinal hernia. In most of these patients, there is no transversalis fascia tear; the conjoined tendon and cremasteric mechanism is functional and strong, and the relationship of the inguinal cord to the floor and to the lower angle of the inguinal canal is in order. There has occurred in these young men a filling of a congenital peritoneal diverticulum, which has then bulged into its natural outlet, the internal inguinal ring; dilatation of the internal ring then occurs as a *result* of occupancy, not as a cause of it.

Any surgeon who deals with this group of patients has had qualms when, after opening the external oblique, it becomes his duty to elevate the cord, "dissect it free from surrounding structures," and more or less forcibly deliver it, preparatory to excision of the sac and to a Bassini or Halsted transplant. In the process of such dissection, he must destroy, between the cord and the floor of the canal, effective, valuable fibers of the internal oblique in order to suture the conjoined tendon to Poupart's and, if he employs the Halsted technique, in order to suture the divided margins of the external oblique beneath the cord. In such cases, in which the latter suture lines are necessary to bulwark a bulging canal floor, the destructive dissection is necessary. In the group of cases which we here discuss, no such bulging canal floor exists and no such bulwark is needed. I believe the destructive dissection lessens an effective bulwark and an important cord function already existing.

Review of Cases

In the past two years I have carefully selected some 20 cases for simple sac ligation, which I now present in a preliminary report. There is nothing new in the described procedure, simply in the concept of its indication. Whereas we previously used it routinely only for young children, I now favor its habitual use in young, strong, male adults with strong inguinal canal floors. All the 20 patients

were between 15 and 30 years of age. Their hernias were all indirect; in none of them was there a palpable transversalis fascia defect; and all had more or less well developed hernial sacs emerging with the cord through the internal inguinal ring.

The operative repair was as follows: A 2-inch incision was made over the internal ring. The external oblique was divided in the line of its fibers over the internal ring, but the division was not extended into the external ring. The cord was visualized by retraction and dissection, and was carefully left in its bed; the sac was picked up, dissected free from the cord well into the internal ring, and was there transfixed and excised. The floor of the inguinal canal was palpated for defect, and, when none was found, the external oblique fascia, subcutaneous tissue and skin were closed.

So far, all of these patients have been at hard work since their fourth postoperative week. Over a period of 24 months, no case has recurred. Postoperative discomfort has been minimal; there have been none of the frequently seen nerve branch symptoms; convalescence has been shortened; the operative time has been minimized; and the cremasteric reflex has been unimpaired.

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It was a common reflection a couple of decades ago that treatment lagged behind diagnosis; the physician was often accused of being more interested in the latter than in the former. In so far as the charge had reference to the common bacterial infections the lag has been eliminated. Indeed, the position has perhaps been reversed. There is in this field such a wealth of available resources in treatment that the temptation to get busy with one or more of the "sulpha" drugs, or with one or other of the "antibiotics" or, indeed, with one or other or both of these, before the nature of the infection is fully ascertained, is almost irresistible. This is not always the doctor's fault; his hand is sometimes forced by the patient's anxious friends, who do not know, as does the doctor, that powerful remedies sometimes have "side-effects," and that the patient's germ may have been rendered insensitive to the "antibiotic" when he badly needs it, because he has already received it when it was not really necessary or even indicated.—Horder, L: *Fifty Years of Medicine*, New York, Philosophical Library, 1954, p. 11.

TREATMENT OF PINWORM IN CHILDREN WITH TERRAMYCIN*

EDWARD P. BENBOW, JR., M.D.

GREENSBORO

Enterobius vermicularis (*Oxyuris vermicularis*, pinworm, threadworm, seatworm) is one of the most prevalent intestinal parasites of mankind, enjoying a worldwide distribution. Cram⁽¹⁾ reported an incidence of 41.5 per cent in white children in the District of Columbia and 12.9 per cent in Negro children. This difference in incidence between white and Negro children has been observed by other investigators⁽²⁾.

The treatment of pinworm infestation has been most discouraging until the present time. One of the reasons for this difficulty is that no host other than the human being is necessary to complete the life cycle of this parasite. This fact makes it more difficult to break into the life cycle of the pinworm effectively. In trichinosis, for instance, the hog is necessary as an outside host to complete the life cycle of this parasite. Thorough cooking of pork, therefore, makes it easy to eliminate *Trichinella*. No such easy method is available as far as the pinworm is concerned. The eggs which are deposited in the perianal folds are transmitted to the mouth via the fingernails, no outside host being necessary for reinfestation.

The use of Terramycin to eradicate this commonly occurring form of parasitism in children has been advocated in the past two years^(2,3). Various carefully written reports of well controlled studies have appeared in recent publications. It is not the purpose of this report to duplicate, prove, or disprove previously reported results and conclusions, but to emphasize the fact that gratifying results can be obtained by the administration of Terramycin in the treatment of pinworm in children.

This is a report of 78 cases of *Enterobius vermicularis* infestation in children who were treated with Terramycin. An effort is made to determine the efficacy of this agent in the treatment of pinworms. It is hoped that the results might help determine whether it is better, in this instance, to give the Terramycin in a single daily dose or divided daily doses, and also the minimum dosage that will produce the maximum desired effect.

*The Terramycin used in this study was donated by Charles Pfizer & Co., Inc.

Method

The individuals treated in this study were private patients except for a small number (4) referred for treatment by the Guilford County (N.C.) Health Department. All patients were grouped and treated with Terramycin Hydrochloride administered orally in the following manner.

Group A: Patients given a single daily dose of Terramycin calculated to be 10 mg. per pound of body weight.

Group B: Patients given a calculated dosage of 10 mg. of Terramycin per pound of body weight in equally divided doses four times a day

Group C: Patients given 100 mg. of Terramycin four times a day

A positive smear was obtained from the perianal folds with a National Institute of Health cellophane-tipped swab on all patients prior to treatment. The Terramycin was administered by mouth in all cases, but the age of the patient determined the form supplied in each instance. All children under five who could not swallow a tablet or capsule without difficulty were given a palatable preparation which was easily administered from either a calibrated pipette, or "dropper," or by teaspoon. Older children received the medication in either capsules or sugar-coated tablets. No patient failed to accept the preparation readily.

All patients received treatment at home for 10 successive days and 10 days after treatment was discontinued returned to the office for another NIH swab examination. The morning bath was omitted on the day of the return visit in order to rule out the possibility of a negative swab examination as a result of washing any remaining ova from the perianal folds.

Results

The results of treatment and the incidence of side effects are summarized in table 1.

Group A

In this group 10 mg. of Terramycin Hydrochloride per pound of body weight was administered in a single daily dose to 29 patients, whose ages ranged from 16 months to 9 years. NIH swabs were negative in 27 patients and positive in 2 patients 20 days after the onset of treatment, or 10 days after the treatment stopped. One patient, age 3,

Table 1
Results and Side Effects

Group	No. Patients	Cured		Failed		Side Effects	
		No.	%	No.	%	Vomiting	Diarrhea
A	29	27	93	2	7	1	3
B	29	29	100	0	0	0	3
C	20	18	90	2	10	0	0

vomited a 400 mg. dose of Terramycin. Three cases reported "loose stools" during treatment.

Group B

In this group a total daily dose of 10 mg. of Terramycin Hydrochloride per pound of body weight was divided into four equal parts and administered four times daily to 29 patients with ages ranging from 21 months to 11 years. All 29 patients had negative NIH swabs on the twentieth day after the onset of treatment. In 2 patients pinworms reappeared one month or longer after treatment ceased, but this was probably due to reinfection. After positive NIH swabs were obtained, both patients were re-treated with Terramycin in the same dose as previously used, and again negative swabs were obtained 20 days after the onset of the second course of treatment. Two patients, aged 3 and 10 years, respectively, reported diarrhea during treatment. One patient, age 5 years, reported some "loose stools."

Group C

In this group 100 mg. of Terramycin Hydrochloride was administered four times daily to 20 patients whose ages ranged from 14 months to 12 years. Eighteen patients had negative NIH swabs after treatment was completed. Two patients had positive NIH swabs 10 days after treatment was stopped. Both of these patients were treated again with the same dose of Terramycin. After this second course of Terramycin, one patient remained positive, while the other had become negative. No side-effects were reported in this group.

Comment

It is readily agreed that one negative swab examination after treatment does not prove that the offending parasites have been eradicated. Impressions gained, however, are sometimes of clinical importance if they are consistent, and the gratitude displayed by mothers who observed more restful sleep, better appetites, fewer complaints of abdom-

inal pain, and cessation of anal scratching among the children treated in this study bears out well the results of the NIH swab examinations.

It is to be emphasized that an optimum "cure" rate in pinworm requires, in addition to Terramycin, strict hygienic measures in the household.

Summary and Conclusions

Seventy-eight patients were treated with various dosages of Terramycin Hydrochloride. It would appear from the results obtained that Terramycin given daily in divided doses is superior to administration of a single daily dose. Since the "cure" rate in group B, in which 10 mg. of Terramycin per pound of body weight was administered daily in four divided doses, is 100 per cent, further investigation using smaller amounts of Terramycin in divided doses is indicated.

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Mortality Factors in Acute Appendicitis

Twice within the past three and a half months one medical columnist has written on acute appendicitis. One article was entitled "Danger is Removed in Appendicitis." The first sentence read, "Appendicitis is not the trouble maker of two decades or more ago." It would be hard to imagine a more misleading statement. The second article was entitled "Appendicitis. Surgery or Antibiotics?" It began: "The death rate from appendicitis has dropped so sharply that we no longer fear the disease." This article quotes, with apparent approval, two series of cases treated by antibiotic therapy. The first series concerned 47 patients with simple acute appendicitis who were treated by injections of penicillin at two hour intervals around the clock. Within 48 hours 42 were well on the way to recovery. But two patients required operations because they did not improve, two required additional antibiotic therapy because their appendices ruptured under treatment, and the remaining patient, who struck me as notably intelligent, withdrew from the experiment and went elsewhere to be operated on. The second series concerned 14 patients with peritonitis following rupture of the appendix. They did well on penicillin therapy and none of them required surgery, but two, again notably intelligent, insisted on appendectomy.—Boyce, F. F.: The Role of Atypical Disease in the Continuing Mortality of Acute Appendicitis, *Ann. Int. Med.* 40:670 (April) 1954.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

MAY, 1955

THE ONE HUNDRED AND FIRST ANNUAL SESSION

The one hundred and first annual session of the Medical Society of the State of North Carolina was an eventful one. The most important action taken was to amend the By-Laws of the State Society so that qualified Negro physicians might be admitted to the scientific and business sessions of the Society. This historic decision is discussed in a separate editorial.

The Executive Council held an all-day session on Sunday, thereby saving the House of Delegates much time and energy in considering routine business. The House of Delegates, as usual, began its first session on Monday afternoon, and did not adjourn, except for dinner, until nearly midnight.

One of the most important reports pre-

sented to the House was that of Dr. Norris Smith. He gave a thoughtful and illuminating discussion, illustrated with lantern slides, on the problem of hospital insurance. Dr. Smith pointed out the great advantage of the co-insurance type of policy, in which the individual assumes the first \$25-\$50 of his hospital expenses. It is hoped that Dr. Smith's discussion will be published in the JOURNAL for the benefit of those who did not hear it presented to the House of Delegates.

Another very important action, taken on the motion of Dr. Elias Faison of Charlotte, was that instead of waiting until the last General Session at 5 o'clock on Wednesday afternoon, the installation of the president-elect be held at the annual President's Night session. This motion was passed without a dissenting vote, and a number of members were heard to comment that they wondered why someone had not thought to propose this change long ago. The American Medical Association's custom of having the president-elect take the oath of office, give his inaugural address, and take over the office of president on the opening night of the Society, is really more logical than that of having the outgoing president review his year in office. The Committee on Constitution and By-Laws will no doubt offer a suitable recommendation in accord with Dr. Faison's motion.

The Salk polio vaccine was, of course, a subject of interest. Dr. Roy Norton, who as president of the National Health Officers Association participated in a recent conference on the subject, said that while the vaccine was not 100 per cent effective, he thought that it could eventually result in control of polio, and that inoculations of children in the younger age group should be continued. Since then, of course, the program has been halted for further study.

The program of the Society's scientific sessions was well balanced, and both individual papers and panel discussions were of a high order. The 50 scientific exhibits provided was an all-time high for our Society. Most of the medical visitor's time could have been spent with profit in viewing these exhibits alone. The audio-visual programs on Sunday and Monday were well attended and highly instructive.

A number of distinguished guests were present, including our native son, Dr. Grafton Love, chief of the neurosurgical depart-

ment of the Mayo Clinic. The American Medical Association was well represented by the secretary and general manager, Dr. George Lull, who addressed the Second General Session on the subject "This Is Your A.M.A.," and by Dr. Tom Hendricks, secretary of the Council on Medical Service, who addressed the Officers' Breakfast Tuesday morning on "Progress in Medical Services." Among other out-of-state guests who took part in the program were Dr. Hugh H. Hussey, associate professor of medicine at Georgetown University; Dr. Conrad M. Riley, of The Babies Hospital, New York City; Dr. Lamb of the National Foundation for Infantile Paralysis (pinch-hitting for Dr. Hart E. Van Riper); and Dr. Otto C. Brantigan, professor of thoracic and clinical surgery at the University of Maryland.

The President's Night, as usual, was the social high light of the meeting. Dr. Robert A. Ross as toastmaster kept everyone in a good humor with his witty remarks. President Zack Owens' address had the merit of brevity, but also contained much food for thought. It will, of course, be published in this JOURNAL. Two of our own doctors who have brought honor to the state were recognized at this dinner: Dr. Karl B. Pace, the A.M.A. General Practitioner of the Year, and Dr. Joseph J. Combs, president-elect of the Federation of the State Medical Examining Boards of the United States.

Mr. Herb Shriner, of the P. Lorillard Company, gave a witty and entertaining address. After adjournment, Vaughn Monroe and his original band presented a floor show through the courtesy of the Pumphrey Agency, Richmond. Music for the President's Ball was furnished by Harry Marshard and his orchestra.

The Memorial Service on Sunday night was presided over by Dr. Charles H. Pugh. The Rex Hospital nurses' Choral Club rendered a number of solo selections that would have done credit to any college glee club. Dr. Sydnor L. Stealey, president of the Southeastern Baptist Seminary, gave a thoughtful and inspiring address, "Strength Inside."

At the second session of the House of Delegates the Nominating Committee brought in its report. Dr. Donald Koonce's selection as president-elect occasioned no surprise. He has served the Society faithfully as councilor of the Third District, as chairman of the Cancer Committee, and as chairman of the

Public Relations Committee. The Society can look forward to two more constructive years, with Dr. J. P. Rousseau as president and Donald Koonce as president-elect. Other officers whose names were presented by the Nominating Committee and elected without dissent were:

President

James P. Rousseau, Winston-Salem

President-Elect

Donald B. Koonce, Wilmington

First Vice President

Edward W. Schoenheit, Asheville

Second Vice President

Milton Clark, Goldsboro

Constitutional Secretary and Treasurer

Millard Hill, Raleigh

Speaker, House of Delegates

G. Westbrook Murphy, Asheville

Vice Speaker, House of Delegates

Lenox Baker, Durham

Delegates to American Medical Association:

Millard D. Hill, Raleigh

Elias Faison, Charlotte

Charles F. Strosnider, Goldsboro

Alternate Delegates to American Medical Association:

Joseph F. McGowan, Asheville

William Nicholson, Durham

Ernest Craig, Chapel Hill

For Members of the State Board of Health:

Grady Dixon, Ayden

G. Curtis Crump, Asheville

Newly elected councilors:

First District Councilor

Dr. T. P. Brinn, Hertford

Vice Councilor

Dr. Quinton E. Cooke, Murfreesboro

Second District Councilor

Dr. F. P. Brooks, Greenville

Vice Councilor

Dr. F. Simons Patterson, New Bern

Third District Councilor

Dr. Dewey H. Bridges, Bladenboro

Vice Councilor

Dr. W. A. Greene, Whiteville

Fourth District Councilor

Dr. Henderson Irwin, Eureka

Vice Councilor

Dr. Ernest L. Strickland, Wilson

Fifth District Councilor

Dr. Louten Hedgepeth, Lumberton

The weather was almost perfect until the last day, when it was a little too warm for comfort. The attendance almost reached the thousand mark, and all in all the session climaxed Dr. Zack Owens' year as president will go down as one of the most eventful in the Society's long history. The membership of the Society for 1954 was the highest yet attained—2,917—and the number of paid-up members for 1955 is greater than the number at the same time last year.

EDITORIAL NOTES

In the election for General Practitioner of the Year, Dr. George Erick Bell of Wilson received a majority of votes over both the other nominees. While it is extremely unlikely that he will be made the A.M.A. candidate immediately following Dr. Karl Pace's selection, it does mean a great deal for him to be selected as North Carolina General Practitioner of the Year. His many friends rejoice with him in this well deserved tribute.

* * *

In his address at the Officers' Breakfast, Tom Hendricks said that he was impressed by the number of markers commemorating historic events in North Carolina history—among these the Mecklenburg Declaration of Independence. Dr. Zack Owens got a laugh by telling him that Mecklenburg County still had the habit, as shown by their county society recently declaring itself independent of the State Society.

* * *

Tom Hendricks began his address to the Officers' Breakfast by saying that two Hoo-siers—he and Herb Shriner—were on the program of this meeting. Some thought that his talk was quite as good as Herb's. He spiced his serious remarks with enough humor to keep everyone interested. For example, he defined an economist as a man with a Phi Beta Kappa key on one end of his watch chain and no watch on the other end.

At the conclusion of his speech he gave a dramatic demonstration of the danger of internal dissension. He used a glass bottle designed by Dr. Charles Kettering so strong that he drove two nails into a piece of wood, using the bottle as a hammer. Then he had two small pellets dropped into the bottle, which immediately exploded into fragments. This was to emphasize the need for harmony in our profession.

* * *

NEGRO PHYSICIANS TO BE ADMITTED TO THE STATE MEDICAL SOCIETY

The recent meeting of the State Medical Society made medical history. After five years of consideration and evading the issue, the House of Delegates decided by a vote of 104 to 37 to admit qualified Negro physicians to membership in the State Society.

The Committee on Membership appointed by President Zack Owens to study the question and to report to the House of Delegates

this year recommended that the By-Laws of the State Society be amended to read: "Be it further enacted that qualified Negro physicians be admitted to the scientific and business session of the Medical Society of the State of North Carolina." After a lengthy debate, which was spirited but for the most part free from bitterness, the report with its recommendation was adopted at the Monday meeting of the House of Delegates, and re-affirmed at the second meeting on Wednesday afternoon.

The Committee on Constitution and By-Laws, of which Dr. Roscoe McMillan is chairman, now has the task of amending the By-Laws in accord with the committee's recommendations. This should not be difficult, however, since the same recommendation was made by Dr. McMillan's committee at the 1954 annual session, but was then tabled.

The Committee on Membership, composed of Dr. Street Brewer, Dr. Ben Royal, and Dr. Paul Whitaker, deserves great credit for the calm, dispassionate, scientific way it went about solving this knotty problem. Dr. Paul Whitaker deserves especial praise for the way in which he read the report. Dr. Westbrook Murphy, the speaker of the House, deserves more than honorable mention for the masterly way in which he handled the ensuing debate. No member, regardless of his personal feelings, could say that Dr. Murphy was not absolutely fair and impartial in the difficult decisions he had to make during the discussion.

Now that it has been shown that an overwhelming majority of the delegates recognize the justice of allowing Negro physicians to share in the opportunity of keeping up with medical advances which membership in the state and county societies affords, it is to be hoped that there will be no more agitation about the subject. Doubtless some of our Negro colleagues are disappointed that social as well as scientific and business meetings will not be open to them in the near future. It is also probable that some of the white members would prefer that not even the scientific sessions should be made available to their fellow physicians of the Negro race. It is to be hoped, however, that the extremists on each side will accept what seemed to be the only possible solution at this time. The doctors of each race have similar problems and should have the same desire to serve humanity.

BULLETIN BOARD

INAUGURAL REMARKS OF PRESIDENT JAMES P. ROUSSEAU

No possible event in my medical career could have filled me with more grateful appreciation or more anxiety than to be chosen to serve in the highest office of the Medical Society of the State of North Carolina. To be selected by one's friends and colleagues for this high honor, after 35 years of medical practice, stirs something deep within my heart. The State Society has played an important role, not only in the welfare of the medical profession and of the public, but in my own life as well, and I am grateful to it on all accounts. I hope I can still render some service in part payment of this debt of gratitude to the Society.

During the past year, as president-elect, I have been closely associated with our retiring president, Zack Owens, with other honored predecessors in this office, with the executive council, and with the chairmen and members of our various committees. I have observed their judgment and wisdom and their endless struggle with problems affecting the public as well as every medical practitioner. This experience has caused my anxieties of a year ago to change to courage and hope for continued progress and achievement in every phase of medicine. My numerous discussions, not only with these men but with many other physicians and leaders in other walks of life, have been informative and intellectually stimulating to me.

In addition to the oath of office I have just taken as your president, I further pledge to face the criticisms, problems, and issues that will arise with sincerity, honesty, justice and truth, as I see it. My hope is that I will make as few mistakes as possible, and that these may be palliated by the motives behind them. My experience of the past year has given me a greater respect for the intelligence of my contemporaries, and a greater desire to see Medicine prosper and progress toward that which is positive and constructive.

The following short prayer attributed to Reinhold Niebuhr has always helped me when I was faced with difficult problems:

Give me the courage to change what can be changed,
The serenity to accept what cannot be changed,
And the wisdom to know one from the other.

COMING MEETINGS

Duke Medical Postgraduate Medical Courses—Duke Hospital, Durham, June 20-23; aboard the M. S. Stockholm, November 23-December 5.

Southern Pediatric Seminar—Saluda, North Carolina, July 11-16; 18-23.

Tenth District Medical Society Fall Symposium—Memorial Hospital Medical Library, Asheville, October 12.

American Medical Association, One Hundred and Fourth Annual Meeting—Atlantic City, June 6-10.

Trudeau School of Tuberculosis—Trudeau, New York, June 1-29.

American Medical Association Clinical Session—Boston, November 29-December 2.

American Proctologic Society—Fifty-Fourth Annual Meeting—Hotel Statler, New York City, June 1-4.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

The Medical School of Duke University will conduct a postgraduate course for doctors from throughout the Southeast June 20-23. Dr. William M. Nicholson, director of postgraduate education, has announced.

All lectures are scheduled during morning hours of the four-day meeting, with afternoon programs left open for participants to choose ward rounds or visits to any of Duke's 39 specialty clinics.

The program is as follows:

MONDAY, JUNE 20

- 8:30 a.m. Registration. Room 2031
- 9:00 a.m. The Home Treatment of the Patient with Pulmonary Tuberculosis. Dr. Elijah E. Menefee.
- 10:00 a.m. A Discussion of Asthma and the Postural Syndrome. Dr. O. C. E. Hansen-Prüss.
- 11:00 a.m. The Identification of the Common Pathogenic Fungi.
Dr. Norman F. Conant
- 12:00 Noon Lunch
- 2:00 p.m. Ward Rounds or Visit to the Clinics
- 7:30 p.m. Informal Discussion: Subject: "The Anxious Patient." Dr. Elbert L. Persons, Leader; Dr. Ewald W. Busse and Dr. William W. Shingleton.

TUESDAY, JUNE 21

- 9:00 a.m. The Pathological Changes in Obstructive Pulmonary Disease.
Dr. Wiley D. Forbus
- 10:00 a.m. Inhalation Therapy in Obstructive Pulmonary Disease.
- 11:00 a.m. Dr. John B. Hickam, Dr. Elijah E. Menefee, and Dr. Charles R. Stephen.
- 12:00 Noon Lunch.
- 2:00 p.m. Ward Rounds or Visit to the Out-Patient Clinics.
- 7:30 p.m. Informal Discussion: Subject: "Vertigo." Dr. Ralph A. Arnold, Leader; Dr. Guy L. Odom, and Dr. John B. Pfeiffer.

WEDNESDAY, JUNE 22

- 9:00 a.m. The Relationship of the Upper Respiratory Infections to Pulmonary Disease. Dr. Watt W. Eagle.
- 10:00 a.m. The Indications for Pulmonary Surgery. Dr. Will C. Sealy.

- 11:00 a.m. The Therapy of Pulmonary Bacterial Infections. Dr. Samuel P. Martin.
 12:00 Noon Lunch.
 2:00 p.m. Ward Rounds or Visit to the Clinics.
 6:30 p.m. Dinner. Guest of the Faculty of the Medical School.

THURSDAY, JUNE 23

- 9:00 a.m. The Medical Therapy of Tic Douloureux. Dr. Barnes Woodhall.
 10:00 a.m. A Discussion of Lesions of the Breast. Dr. Clarence E. Gardner.
 11:00 a.m. Recent Advances in the Therapy of Peptic Ulcer. Dr. Julian M. Ruffin.
 12:00 Noon Lunch.
 2:00 p.m. Ward Rounds or Visit to the Clinics.

All meetings will originate in room 2031, Duke Hospital. Registration will also take place in 2031, and the fee will be \$25. Rooms are available in the University graduate dormitories. Meals may be obtained in the graduate dormitory or in the Oak Room in the University Union.

Certificates of attendance will be provided.

* * *

A unique physical reaction gives a camel more mileage per gallon of water than any other large animal in the world. A camel in the severe heat and the water shortage of the desert can stand to lose an amount of water equal to 30 per cent of its body weight, a Duke University research team told the Federation of American Societies for Experimental Biology, meeting in San Francisco, April 13.

The Duke scientist and her husband, Dr. Knut Schmidt-Neilsen, led a year-long expedition into the Sahara Desert in 1953-1954 to study the physiology of the camel. Co-authors of the paper and members of the Schmidt-Neilsen expedition include T. Richard Hout of the University of Pennsylvania, and S. A. Jarnum of the University of Copenhagen, Denmark.

In an earlier paper at the meeting the research team reported on the camel as a water-conserver, pointing out that he allows his temperature to rise almost 12 degrees Fahrenheit before giving up much water in sweat.

* * *

On April 15 Dr. James V. Warren of Duke addressed the Federation on the physiologic explanation of fainting due to coughing. In coughing, blood vessels in the chest and brain are suddenly subjected to intense pressure which, when great enough, can cause unconsciousness, Dr. Warren reported.

Co-authors of the paper are Dr. Warren, Dr. Henry D. McIntosh, and Dr. E. Harvey Estes, all staff members of Duke Medical School and of the Veterans' Administration Hospital, Durham, N. C.

The report is based on studies of circulatory response measured in some 100 patients at Duke and at the VA Hospital by means of two instruments, a manometer, and a plethysmograph.

The Duke-VA team is carrying out further studies in the project under a research grant from the American Heart Association.

* * *

Duke University has just established the first University-wide Council on Gerontology in the South to help meet the increasing problems of our aging population, President Hollis Edens recently announced.

Comprising authorities from 15 departments within the University, the Council will conduct seminars, guest lectures, conferences and institutes, as well as research, aimed at helping older people to

lead "satisfying, useful and economically-independent lives and to maintain better health."

The Council initiated its program with a public lecture at the University on May 19 by Dr. Wilma Donahue, of the University of Michigan.

The work will be carried out primarily by a three-man steering committee and by special panels of members. Members of the steering committee are Dr. Ewald W. Busse, head of Duke's Department of Psychiatry and chairman of the Council; Dr. Howard E. Jensen, chairman of the Sociology Department; and Dr. Eliot H. Rodnick, chairman of the Psychology Department. Miss Frances Jeffers, research associate in psychiatry, will serve as executive-secretary of the Council.

Other Council members include Dr. William H. Cartwright, professor and chairman of education; Dr. Wiley D. Forbus, professor and chairman of pathology; Julia R. Grout, professor of physical education; Robert Kramer, professor of law; Dr. Joseph E. Markee, James B. Duke professor and chairman of anatomy; Dr. E. Charles Kunkle, associate professor of medicine; Dr. Barnes Woodhall, professor of neurosurgery; Dr. Frank T. de Vyver, professor of economics; Dr. Russell Dicks, associate professor of pastoral care; Dr. Bayard Carter, professor and chairman of obstetrics and gynecology; Dr. Philip Handler, professor and chairman of biochemistry; and A. S. Brower, business manager and comptroller of the University.

* * *

Schering Award winners in the 1954 competition among medical students have been announced by Robert W. Burlew, M.D., chairman of the award committee.

The annual awards include three \$500 first prizes and three \$250 second prizes. Winner of first prize was Billy Franklin Andrews of Duke whose subject was "Prophylactic and Therapeutic Uses of Parenteral Antihistamines."

An intern at Duke Hospital, Mr. Andrews plans to pursue an investigative and teaching career in internal medicine. He is an effective speaker and speaks frequently to clubs and church groups. His wife is a nurse at the Durham Hospital for Crippled Children.

A North Carolinian, Mr. Andrews did his undergraduate work at Wake Forest College. Throughout his academic career, he has won many honors and has been a member of many honor societies, including Gamma Sigma Epsilon, Delta Sigma Phi, Alpha Epsilon Delta, and Beta Beta Beta.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Planning sessions for postgraduate medical courses were held recently in Asheville and Morganton for postgraduate courses to be offered during the fall, it was announced by Dr. W. P. Richardson, assistant dean of Continuation Education. The Morganton Postgraduate Medical Course will be held on Wednesday afternoons and evenings for six weeks beginning September 21, and the Asheville Postgraduate Medical Course will be offered Thursday afternoons and evenings for six weeks beginning September 22 (excluding the week of the Tenth District Medical Society Annual Meeting). Dr. William H. Kibler is the chairman for the planning committee for the Morganton course and Dr. Leon H. Feldman is chairman of the planning committee for the Asheville course.

* * *

Dr. Harley C. Shands, associate professor of psychiatry, addressed the Massachusetts Psychological Association on the subject of language and Psychotherapy on April 30 in Worcester, Massachusetts.

Dr. Robert Ross, professor of obstetrics and gynecology, and Dr. Arthur H. London, clinical professor of pediatrics, spoke at the Fourth District Medical Society at Farmville, Virginia, on April 19. Dr. Ross also spoke at the Third District Meeting of the American Academy of Obstetrics and Gynecology in Hershey, Pennsylvania, on April 23. His topic was "Geographic and Socio-Economic Factors Which Have Influenced Our Specialty."

* * *

Dr. George Ham, professor of psychiatry, participated in a panel discussion on "Emotional Factors in Cardiac Disease," at a meeting of the American College of Physicians in Philadelphia. Dr. Ham was recently voted a Fellow of the American Orthopsychiatric Association at the annual meeting of the Association.

* * *

Distinguished service awards were presented to 12 medical alumni "who have rendered invaluable service in the U.N.C. Medical School Extension Program" by Dr. W. Reece Berryhill, dean of the University of North Carolina Medical School, at the Annual Medical Alumni Banquet on April 14, during the celebration of the Seventy-Fifth Anniversary of Medical Education at the University of North Carolina. The awards were made on behalf of the Medical School faculty and were presented to the following: Dr. John A. Ferrell, Raleigh, Class of '05; Dr. Benjamin F. Royal, Morehead City, '07; Dr. Karl B. Pace, Greenville, '12; Dr. William M. Coppridge, Durham, '16; Dr. Fred C. Hubbard, North Wilkesboro, '16; Dr. W. R. Stanford, Durham, '17; Dr. George L. Carrington, Burlington, '18; Dr. Roy B. McKnight, Charlotte, '18; Dr. Donnell B. Cobb, Goldsboro, '19; Dr. Shahane R. Taylor, Greensboro, '19; Dr. Claiborne T. Smith, Rocky Mount, '16; and Dr. M. D. Bonner, Jamestown, '28.

Dr. Verne Blackwelder, Lenoir, succeeding Dr. Fred C. Hubbard, was installed as president for the coming year. Other new officers include Dr. Adam Thorp, Rocky Mount, president-elect; Dr. Milton Clark, Goldsboro, vice president; Dr. Fred Patterson, Chapel Hill, secretary; and counselors—Dr. Hugh Smith, Greenville, South Carolina, and Dr. Harry Brockmann, High Point.

A surprise distinguished service award was presented Dr. W. Reece Berryhill, dean of the School of Medicine, who was described as "Beloved Teacher and Distinguished Medical Educator."

Dr. W. P. Richardson, assistant dean for Continuation Education at the School of Medicine, read Dr. Berryhill's award citation which said, "In recognition of your vision, your faith, your wise judgment, your untiring efforts, your devotion to the highest ideals of medical education, of all those qualities of mind and heart which have contributed so largely to the fulfillment of the dreams and aspirations of many people in the development of a great center of medical education and service at the University of North Carolina, the faculty of the School of Medicine confers upon you this Distinguished Award."

NORTH CAROLINA STATEWIDE SAFETY CONFERENCE

A statewide meeting sponsored and planned by the Accident Prevention Section of the North Carolina State Board of Health was held in Winston-Salem, on May 20. Speakers were Chris Hinkle, safety director, E. I. DuPont Corporation, Kingston; L. R. Harrill, State 4-H Club leader, North Carolina Extension Service, State College, Raleigh; Miss Ella Blossom, student, Woman's College, University of North Carolina, Greensboro; and Dr. Walter C. Humbert, Pitt County Health Officer, Greenville.

HOSPITAL FOOD SERVICE INSTITUTE

The third annual Hospital Food Service Institute for dietitians and food service managers in small hospitals in North Carolina will be held June 9, 10 and 11 at the University of North Carolina, Chapel Hill. The institute is sponsored by the North Carolina Hospital Association, the North Carolina Dietetic Association, and the North Carolina State Board of Health, at the request of those who have attended previous institutes.

Good food, served with a minimum of labor and at the most reasonable cost, is the goal of all hospital food service managers and administrators. A program of addresses, panels, and demonstrations has been planned toward this objective. Some of the topics to be discussed are: Planning The Basic Menu, What To Buy and How To Use It, Know Your Raw Food Cost and Portion Control.

Administrators are invited and urged to send a representative from their hospitals. Write the Nutrition Section, North Carolina State Board of Health, Raleigh, North Carolina, for information regarding registration and dormitory reservation.

THE KEELEY INSTITUTE

Announcement was made here recently of the appointment of two new staff members of The Keeley Institute in Greensboro. They are R. H. Dovenmuehle, M.D., and the Reverend A. I. Drake.

A graduate of St. Louis University School of Medicine, Dr. Dovenmuehle will serve as consultant in psychiatry. After two years service as a psychiatrist in the Army, he had further training at Duke University and remained with the staff of the Department of Psychiatry.

The Reverend Mr. Drake, pastoral counselor, came to The Keeley Institute with extensive experience as chaplain and pastoral counselor at both Bellevue and Fordham Hospitals. He has worked with alcoholics for the past 10 years, and is a frequent speaker at Alcoholics Anonymous and public meetings on alcoholism. Chaplain Drake will work closely with Alcoholics Anonymous, the Church, and other supporting agencies in helping the alcoholic return to a normal life in his community.

EDGECOMBE-NASH MEDICAL SOCIETY

The Edgecombe-Nash Medical Society held its regular monthly meeting in Rocky Mount on April 13. Dr. C. T. Smith, who was in charge of the program, had as guest speaker Dr. Julian M. Ruffin, Department of Medicine, Duke University, who spoke on "The Medical Management of Peptic Ulcer."

At the March meeting the society lent its support to the nomination of Dr. R. J. Walker as a candidate for the Reynolds Award, given annually for outstanding work in the field of public health.

It was announced that the three health departments in the two counties will cooperate in the administration of Salk vaccine to all first and second grade students.

In order that there might be a better understanding between the medical profession and the press and the radio relative to the release of news concerning the physician and his patient, the Public Relations Committee announced plans for a dinner at which representatives of all radio stations and newspapers in the two counties would be guests. This dinner was recently held in Rocky Mount.

SOUTHERN REGIONAL PROGRAM OF GRADUATE EDUCATION

Six southern universities are offering, or expect to offer in the near future, jointly planned Master's degree programs in nursing. The universities which have worked with the Southern Regional Education Board in developing the programs are the University of Alabama, Emory University, the University of Maryland, the University of North Carolina, The University of Texas, and Vanderbilt University. The Commonwealth Fund and the W. K. Kellogg Foundation have granted funds to the universities to help launch the new graduate programs and to provide a limited number of fellowships for well qualified students. The cooperating schools expect to serve the entire Southern region by establishing programs to prepare nurses for advanced practice, administration, teaching, or supervision in specialized fields.

The agreement establishes the Regional Committee on Graduate Education and Research in Nursing to advise the universities and the board on the project. Members of the Regional Committee are: Marjorie Bartholf, dean, School of Nursing, University of Texas; Ada Fort, School of Nursing, Emory University; Florence Gipe, dean, School of Nursing, University of Maryland; Julia Hereford, dean, School of Nursing, Vanderbilt University; Elizabeth Kemble, dean, School of Nursing, University of North Carolina.

Detailed information on all aspects of particular programs, including the fellowships, is available through the deans of nursing listed on page 2. Additional copies of this brochure may be obtained from any member of the Regional Committee.

AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

A cordial invitation is extended to all members of the Woman's Auxiliary to the American Association, their guests, and the guests of physicians attending the convention of the American Association, to participate in all social functions and general meetings at the thirty-second annual convention of the Auxiliary, which will be held in Atlantic City, June 6-10.

Headquarters will be at the Haddon Hall Hotel. Programs, badges, and tickets for the various social functions will be available at the registration desk.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

New Pamphlet Lists "Ups" in Medical Education

Record achievements by our nation's medical schools during the past year are emphatically pointed up in an attractive new 12-page pamphlet currently in production by the American Medical Association. The pamphlet entitled, "What's Up With Our Medical Schools?" discusses four main phases of medical education in which the 80 approved medical schools in the country now are surpassing all previous records. These areas are: (1) medical school enrollments; (2) number of medical school graduates; (3) medical school finances, and (4) medical school facilities.

Particularly suitable for distribution in doctors' reception rooms, through schools and at health fairs, quantities of the pamphlet will be available after July 1 from state medical societies or the A.M.A.'s Public Relations Department.

* * *

New Jersey Doctors Contribute to AMEF

A treasury grant of \$25,000 from the Medical Society of New Jersey will be awarded to the

American Medical Education Foundation this year to help support our nation's medical schools. The contribution will be presented to the Foundation during the Annual Meeting of the A.M.A. at Atlantic City.

Total contributions to the AMEF so far in 1955 exceed \$303,685 from 4,225 donors. This figure includes also a grant of \$100,000 from the A.M.A.

* * *

TV Cameras Focus on Annual Meeting

What goes on behind the scenes at the world's largest medical meeting will be the theme of the "March of Medicine" telecast on Tuesday, June 7. This third program in the 1955 spring series of "March of Medicine" shows will be beamed directly from the convention halls of the A.M.A.'s one hundred and fourth annual meeting at Atlantic City. Sponsored by Smith, Kline and French Laboratories in cooperation with the A.M.A., the live telecast will be carried over the NBC-TV network at 9:30 p.m. EDT, replacing Armstrong Cork Company's "Circle Theater."

Outstanding scientific features of the meeting will be presented for the benefit of those physicians unable to attend the meeting as well as the interested general public. Check local newspapers for time and station in your area.

* * *

A.M.A. Plans New Type Health Exhibits

To acquaint people with their bodies and the size and location of various organs, the A.M.A.'s Bureau of Exhibits currently is planning a new series of exhibits depicting the basic anatomy of the human body. Each exhibit will feature life size three dimension models of particular parts of the body and should prove invaluable as a health education aid.

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CLINICAL SESSION—AMERICAN MEDICAL ASSOCIATION

For the first time, all six New England States will be host to the Clinical Session of the American Medical Association this fall. The meeting, held in Boston from November 29 through December 2, will provide another excellent opportunity to maintain this region's well established medical leadership recognized throughout the world.

Abstracts of papers, contained in *not over 300 words*, should go direct to the Chairman of the Program Committee (A.M.A.), 22 Fenway, Boston; closing deadline July 15, 1955.

All persons desiring a place on the lecture program at the Boston meeting are urged to communicate immediately with the chairman of the program committee—Theodore L. Badger, M.D., c/o Massachusetts Medical Society, 22 The Fenway, Boston 15.

Applications for space in the Scientific Exhibit are now available and will be sent on request. Exhibits will supplement the lectures as far as possible, and should portray subjects of a broad general interest. Requests for applications should be sent to the Secretary, Council on Scientific Assembly, American Medical Association, 535 N. Dearborn Street, Chicago 10, Illinois.

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

Uniform labeling of dangerous chemicals and drugs to alert users of the hazards in their improper handling was advocated recently by Sanford J. Hill of the E. I. du Pont de Nemours and Company, Wilmington, Delaware. Mr. Hill addressed a meeting of the American Conference of Governmental Industrial Hygienists on "The Manufacturing Chemists' Association Labeling Program," as a part of the Industrial Health Conference held in Buffalo, New York last month.

"The tonnage of chemicals and allied products has grown fantastically in the last thirty years," Mr. Hill stated. "A new chemical or its related compounds may be useful in fields as widely separated as drugs and rocket fuels. As chemical products multiplied and, especially in the organic groups, grew more complex, it became increasingly evident that appropriate labeling was necessary to insure safe handling and use by customers possibly unfamiliar with the properties of the new products."

"The Federal Caustic Poison Act and the various state poison and pharmacy acts chiefly relied in most cases wholly on the word 'poison' to warn the user. Since most chemicals covered by these laws are hazardous mainly by ingestion, the laws met an existing need but are hardly adequate for today's products."

CALVERT SCHOOL FOR HOME-BOUND STUDENTS

Home-bound children throughout the United States, unable to attend regular schools because of crippling or confining diseases or physical conditions, attend a Baltimore school by mail. They go to the Calvert School, an unendowed non-profit institution that for almost 50 years has given an elementary school education to children who cannot attend regular schools. Calvert's courses run from kindergarten through the ninth grade and are accredited by the State of Maryland.

According to Edward Brown, Calvert's headmaster, children with heart conditions make up about

20 per cent of Calvert's shut-in students. Polio patients account for about 15 per cent, chronic asthma for about 10 per cent, and eye, ear and speech defects for about 15 per cent. Muscular dystrophy, cerebral palsy, diabetes and hemophilia are among the other causative factors affecting Calverts' home-bound students.

When a Baltimore whooping cough epidemic in 1905 forced the Calvert Day School to close, the headmaster sent the lessons home with the pupils. This experimental home study system proved so successful that some parents of shut-in children in Baltimore asked for the service regularly. After some years of working only with the home-bound, Calvert extended its service to children living in isolated areas or living abroad where American schools were not available. Today there are 8,000 children in Calvert's world-wide student body.

AMERICAN PROCTOLOGIC SOCIETY

The fifty-fourth annual meeting of the American Proctologic Society will be held at the Hotel Statler, New York City, June 1-4, it is announced by Dr. A. W. Martin Marino of Brooklyn, New York. All meetings are open to the medical profession.

WANTED—WRITERS ON RURAL MEDICINE

A call for country doctors to contribute articles for a book which will describe all aspects of rural practice in an authentic manner has been issued. Interested country physicians are invited to write about all aspects of the neglected subject of rural medicine.

Doctor volunteers from all rural sections of our nation are asked to write directly to Dr. Wallace Marshall, Bank of Two Rivers Building, Two Rivers, Wisconsin, stating those particular subjects in medicine, surgery, and obstetrics and gynecology which are of particular interest to them. The editor wishes to compile a book which will be written by the doctors in rural practice. He particularly desires to receive all details of how individual physicians actually handle medical problems in their own communities.

Charles C Thomas, Publisher, of Springfield, Illinois, will publish the work. Dr. Wallace Marshall, an associate editor for *Medical Times* and a Fellow of the American Medical Writers' Association, will serve as editor. Dr. Marshall will write each contributor. Topics will be assigned along with a reasonable deadline which each author must agree to meet. This material will be revised or rewritten, if necessary, by the editor to assure a reasonable degree of uniformity for the volume. The author's name will accompany each contribution in the book.

BLUE SHIELD MEDICAL CARE PLANS

Dr. Norman A. Welch of Boston, recently was elected president of the Blue Shield Commission, national coordinating agency of the 76 Blue Shield Plans in the United States, Canada, Puerto Rico, and Hawaii.

Dr. Welch was elected during the 1955 annual conference of Blue Cross and Blue Shield Plans, held March 20-24 at Chicago's Edgewater Beach Hotel. He succeeds Dr. L. Howard Schriver of Cincinnati for the 1955-1956 term of office.

Dr. James R. Reuling of Bayside, N. Y., Speaker of the House of Delegates of the American Medical Association is the most recent A.M.A. appointee to the Blue Shield Commission. The other two A.M.A. appointees are Dr. Louis H. Bauer, of New York, and Dr. Edward McCormick, of Toledo, Ohio, past presidents of the A.M.A.

Blue Shield Plans for medical-surgical care now serve more than 31 million people. Blue Cross, the companion plan for hospital care, this year celebrates its twenty-fifth anniversary, has enrollments totaling more than 47 million people in the United States, Canada, and Puerto Rico.

DEPARTMENT OF THE ARMY

The memory of the late Brigadier General James Stevens Simmons, MC, USA (Ret), was honored Thursday, April 21, at a memorial lecture in Sternberg Auditorium, Walter Reed Army Medical Center. The lecture, known as the "James Stevens Simmons Memorial Lecture," will be given annually on a subject dealing with preventive medicine.

Guest speaker was Dr. John H. Dingle, professor of preventive medicine at Western Reserve University School of Medicine, whose topic was "Respiratory Disease Research and Military Preventive Medicine." The lecture was preceded by a memorial comment by Dr. Stanhope Bayne-Jones, technical director of research, Office of the Army Surgeon General.

General Simmons retired on July 1, 1946, after 30 years of service in the Army Medical Corps. At the time of his death July 31, 1954, he was dean and professor at the Harvard School of Public Health.

General Simmons was born June 7, 1890, in Newton, North Carolina. He graduated from Davidson College in 1911, received his M.D. from the University of Pennsylvania School of Medicine in 1915, his Ph.D. from George Washington University School of Medicine in 1934, and a doctorate in public health from Harvard University in 1939.

The appointment of Brigadier General James P. Cooney as the Deputy Surgeon General of the Army was announced recently by the Department of the Army. He succeeds Major General Silas B. Hays who becomes The Surgeon General of the Army on June 1.

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

A New Insecticide—DDVP

A new insecticide, DDVP, more potent in killing insects and less toxic to humans and farm animals than many modern economic poisons, was discovered by research scientists at the Savannah, Georgia, laboratory of the Public Health Service's Communicable Disease Center. The name of the new agent is derived from the initials of its chemical name—dimethyl dichloro vinyl phosphate. DDVP's importance lies in several characteristics which make it different from other insecticides in use today. It may prove to be of significant agricultural as well as public health importance.

One of these characteristics, its very high potency, was illustrated recently in a large dairy barn where there was a high fly population known to be resistant to DDT. The flies were reduced to nearly zero in less than four hours by 8 Gm. of DDVP, where it was estimated that it would have taken 10,000 Gm. of DDT. At the same time, the Savannah research team has shown that DDVP is much safer for animal and man than other organic phosphorous insecticides now in use.

DDVP may prove to be of greatest value where flies and insects have developed a resistance to DDT—one of the problems that has been plaguing

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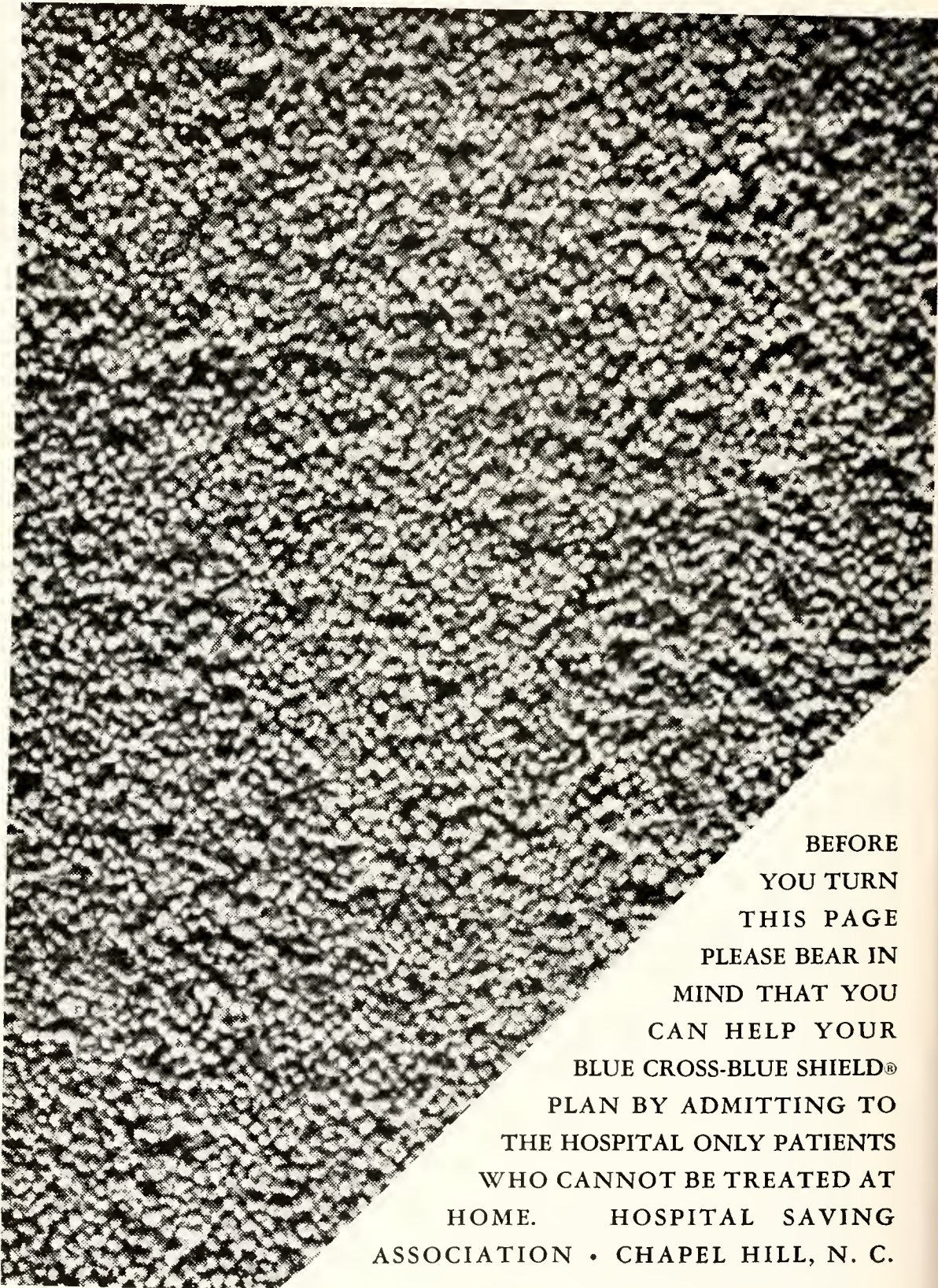
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farmers and health workers alike for the last few years. Since DDVP is an organic phosphorous insecticide, a different chemical family that was not previously considered as substitutes for DDT and its related compounds, its discovery opens up a whole new class of economic poisons, and the Savannah research team has already begun to investigate other closely related chemical compounds and variations of DDVP.

In addition to being effective against flies, the discoverers believe that DDVP will prove useful against several pests of agricultural crops, especially mites and aphids. Because of its high volatility, DDVP, unlike DDT, will not remain effective over long periods of time. Thus, it will be especially suitable on crops where insecticide residues are objectionable.

The new poison was developed by Dr. George W. Pearce, chief of the chemistry section of the Savannah laboratory, and chemists Arnold M. Mattson and Miss Jane T. Spillane. Their scientific paper describing the details of their discovery is to appear shortly in the *Journal of Agricultural and Food Chemistry*.

VETERANS ADMINISTRATION

Veterans treated for mental and nervous illnesses have made an outstanding record of readjustment to gainful life through vocational training, a Veterans Administration study revealed recently.

The study disclosed that 93 out of every 100 of these rehabilitated veterans hold jobs, and nearly all of them like the kind of work they are doing. Of the employed veterans, 84 out of 100 are using skills they learned during training.

The veterans, at the time of the survey, were earning an average of \$70 a week—\$15 above the weekly income of nonveterans in the same age group.

The VA study showed that of the 600,000 disabled World War II veterans who received vocational rehabilitation training over the past 12 years, approximately 150,000 had mental or nervous disorders. This constituted the second largest group of disabled trainees, surpassed in number only by those with orthopedic disabilities such as arm or leg amputations.

VA said the achievements of veterans with mental and neurologic disorders are all the more remarkable, in light of the fact that they have, on the average, higher disability ratings than other handicapped veterans who have trained.

BOOK REVIEWS

Emotions and Bodily Changes. By Flanders Dunbar, M.D., Med. Sc. D., Ph.D., Ed. 4. 1192 pages. Price \$15.00. New York: Columbia University Press, 1954.

This valuable compilation of references to practically all worthwhile literature related to "psychosomatic medicine" has reached high proportions in the fourth edition. The 1192 pages continue to show the industry, thought and excellent judgment characteristic of the previous editions. This work of Dr. Dunbar has certainly made it the standard reference book in this field. Although it will not be purchased as a text book by medical students, it should be in every medical library and general practitioners should have access to it.

The book covers the literature from 1910 to 1953. It is predicted that the next edition will have to be in two volumes. In this one the bibliography occupies 264 pages and the index accounts for another 176 pages.

A new tipped-in chart on "Personality Profiles of Eight Psychosomatic Diagnostic Groups" is a valuable addition. However, it may become detached from the book, and it does not appear very sturdy. Since almost everyone looking into the book will be tempted to unfold the chart, it may not last long. Beyond this, there are no other criticisms—just praise.

Thinking Together About Marriage and Family. By William and Mildred Morgan. 178 pages. Price, \$3.50. New York Association Press, 1955.

Two North Carolina authorities in the field of marriage have just added a valuable contribution that can not fail to be of interest and assistance to any doctor who is called upon to help his patients with their marital problems.

Planned as a help to anyone organizing a course in marriage, the book is divided into two parts: (1) Planning for Marriage, and (2) Planning for Family Life. But while this is its avowed purpose, the book covers a great many of the situations about which puzzled folk consult their family doctor. Written in an easy, readable, conversational style, it offers many suggestions for the solutions of the difficulties that are so familiar to the doctor who invites the confidences of his patients, but who is often somewhat at a loss for practical answers to the puzzles with which he is confronted.

Some of the perplexing problems handled in this practical and helpful treatise are: Courtship and Marriage Choice; Engagement; Relations to Parents; Mature Attitudes and Habits; Money Matters; Marriage Adjustments Call for Maturity; and many other vital concerns of married people and those about to be married.

This reviewer has found the book very helpful and stimulating. He has no hesitancy about recommending it to any doctor who counsels with his patients in their personal affairs.

The Month in Washington

This session of Congress probably is more than half over. On health legislation, two things are becoming apparent. First, Congress is not attaching much urgency to some of the early-blooming issues that were so prominent in January and February. For example, it has been in no hurry to take up such subjects as reinsurance for health plans, guarantees of mortgage loans for health facilities, expanded care for military dependents, or health insurance for government employees. Action may yet come in a rush, and some of these bills may be passed, but not all. The second fact is that Congress this year does seem willing, if not anxious, to take some action on mental health.

At the top of the list of favored mental health bills are identical measures by Chair-

*From the Washington Office of the American Medical Association.

man Priest of the House Interstate and Foreign Commerce Committee and Chairman Hill of the Senate Labor and Public Welfare Committee. These bills, which were not initiated by the Eisenhower administration, provide \$1,250,000 in grants for a three-year survey by non-governmental professional groups of all phases of mental health. Presumably the survey would be conducted by a Joint Commission on Mental Health, formed by the A.M.A. Council on Mental Health and the American Psychiatric Association, with a number of other groups participating.

Considered by these committees at the same time was the administration's proposal for a three-year program of outright grants to states for new and existing mental health programs, with Congress deciding on the money needed.

The survey bill was reported favorably by the House Committee within 10 days after hearings were completed. The grants proposal was held up with the explanation that it properly should be considered with legislation not then before the committee.

The Priest committee then turned its attention to fields other than health; it also has jurisdiction over legislation on railroads, aviation, communications, and federal power. Senator Hill's committee continued on health bills, next taking up his and Senator Bridges' bill for a three-year, \$90 million grant program for construction of non-federal laboratory facilities for research in a wide range of chronic diseases.

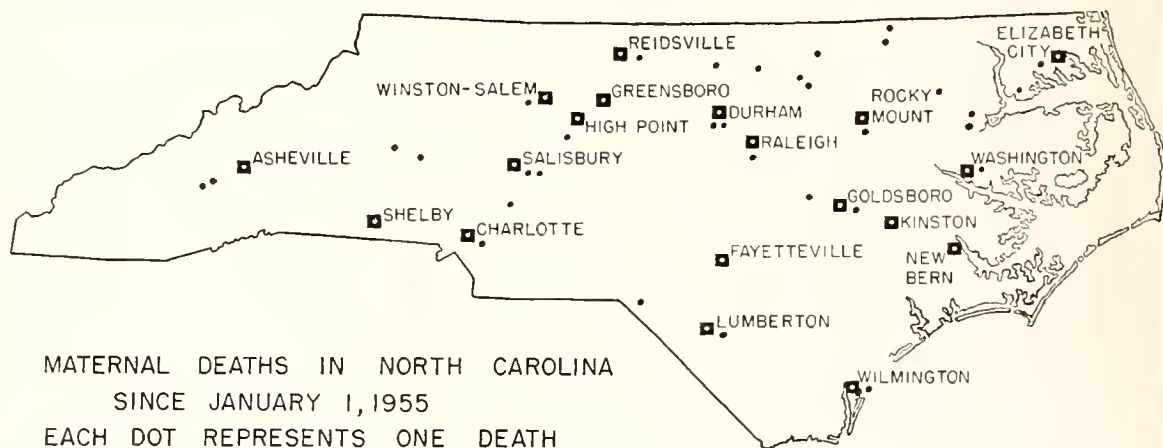
The measure failed to get A.M.A. support, the Board of Trustees deciding it was too broad and loosely written. Dr. George F. Lull, A.M.A. secretary-general manager,

pointed out to the committee that the bill gives no voice to the states and local communities in the development of a planned and integrated system of laboratory and other research facilities.

Prior to final Appropriations Committee action on next fiscal year's budget for the Federal Civil Defense Administration, the A.M.A. urged favorable consideration of the agency's request for medical supplies and equipment. Dr. Lull made the point that it was futile to plan for the medical phase of civil defense unless the profession has the supplies to work with. He warned of the medical problems that would arise from an enemy attack, including radio active fallout. The House proceeded to approve a \$30 million appropriation for stockpiling of supplies and equipment, \$5.3 million less than the administration asked. However, the committee pointed out that FCDA has millions of dollars in unexpended balances.

This same appropriations bill carries approximately \$750 million for the Veterans Administration medical budget for the next fiscal year. The measure contained one surprise: an unexpected \$16,885,000 increase for a start on remodeling certain VA hospitals. The VA originally asked the Budget Bureau to approve \$20 million for this purpose, the Bureau pared it down to \$13,815,000 but the House raised it to \$30 million.

Another bill that moved through the House with a minimum of controversy was one re-establishing the authority of the Secretary of Health, Education, and Welfare to channel surplus government property to health and educational institutions at no cost.



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NORTH CAROLINA

Medical Journal



Vol. 16 No. 6
June, 1955

IN THIS ISSUE:

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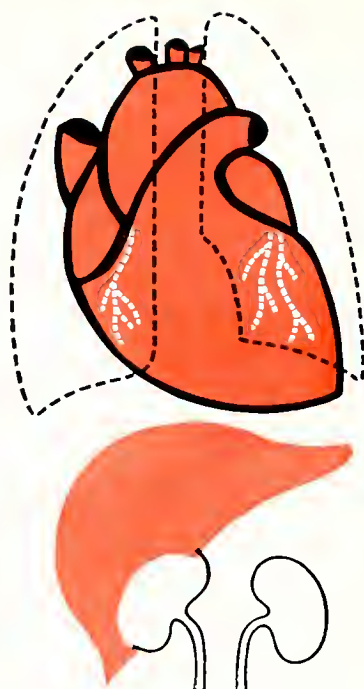
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THE HUMAN SIDE OF MEDICINE

ZACK D. OWENS, M.D.

ELIZABETH CITY

Mr. Toastmaster, invited guests, and fellow members: It has been my happy privilege to serve as your president this past year. I feel very humble when I look back at the distinguished doctors who have served this Society before me. As I approach the high light of my career this evening, I cannot help becoming sentimental and pausing for a moment to review our position as men of medicine in this great Society of ours.

In visiting other societies throughout the nation, I have been impressed by two enlightening speeches: (1) "The Soul of Medicine," by Dr. Harrison Shouders, past president of the American Medical Association, and (2) "Our Sacred Trust," the inaugural address of Dr. Charles Trabue, president of the Tennessee State Medical Association. In the spirit of admiration and gratitude for their inspiration, I will mention some of the ideals expressed by these two great men.

Our Sacred Trust

It is a sacred trust that you have bestowed upon me in electing me as your president, and I hope I have discharged my duties honorably. We all have a sacred trust with regard to our profession, to the communities in which we live, and to our state and country.

I will attempt to point out and emphasize the human side of medicine in our relationship to society. We as physicians are the most highly educated of any professional group. This advantage places us in a higher position of trust and responsibility. We should be the leaders in our community, not only in the preservation of health, but in many other public activities.

To those physicians who have gone before us and paved the way, we owe a debt of gratitude. We should be thankful to them for their contribution and service. We are responsible to them for our sacred heritage.

We have a duty and responsibility to our medical schools. Our tuition was but a trifle of the cost of our medical education. We owe the schools a debt which we can never repay. I urge you to contribute liberally to your medical schools in order that they may obtain the best medical educators as teachers and conduct medical research without having to seek federal aid.

We as physicians have a sacred trust in each other and to the profession to give the best possible medical care. Exorbitant fees, unnecessary surgery, and unnecessary medical care reflect on the honor and integrity of our profession. As in any group, we have a few black sheep, but as a whole the profession still believes and upholds the Hippocratic Oath which we took when we graduated in medicine. Most of us get up in the middle of the night to care for patients, charge reasonable fees, spend hours of our time doing charity work, and are glad to give counsel on any matters we can. We believe in and help to promote the finer things of life. We must continue to take care of the indigent *gratis*, just as we have always done in the past. In regard to others, we should make our charges reasonable, in keeping with the patient's ability to pay.

In our high position of trust we should be honest with ourselves and with our patients in the referral of patients. We should not refer a patient to a particular specialist just because he is a friend. It is our duty and responsibility to make the referral to the most competent physician available, since

a bad result reflects not only on us individually but upon the entire profession.

Our sacred trust in the preservation of health and the alleviation of pain and suffering goes far beyond the administration of pills by a physician and the cold steel of a scalpel by the surgeon. This is the practice of the science and the art of medicine, but we should go further into the human side, which might be called the soul of medicine.

When a patient chooses one of us as his physician or his surgeon, he places his life in our hands. This in itself is the greatest proof of his confidence in us. We should never appear hurried or disinterested. We should be attentive, kind, and sympathetic in order to dispel his fear and uneasiness, and gain his complete confidence. The effort will improve the doctor-patient relationship which seems to be suffering somewhat today and which was such a fine attribute of the physician 20 or 30 years ago, who was considered the most highly respected citizen in the community.

Conclusion

Let us therefore rededicate ourselves to the service of humanity and emulate the Great Physician by doing good for others so that our treasures may be stored in the hearts and minds of men. Let us serve as a lighthouse in our community, guiding the mariner and voyager on the sea of trouble and frustration to a safe and happy landing.

I suppose I am an internist because I believe the internist is the most important man in the medical team. But I know I must yield in glamor (and income) to the surgeon; in the saving of lives to the public health man, to the radiologist in diagnostic precision, to the psychiatrist as an inspiration for modern literature. There are technicians whose manual dexterity is my envy and despair, medical physicists who speak a tongue obviously erudite, but completely incomprehensible to me. All this makes for humility. Yet I come to the conclusion that the internist is the most important man on the medical team. It is not despite, it is because of these many wonderful advances by such diversely gifted men that the role of the internist has become more important.—The Role of the Internist, editorial, *Ann. Int. Med.* 39:957 (Oct.) 1953.

It is no greater sin to kill people with the searing heat of an atomic explosion, or the paralyzing trauma of poison gas, than with the old-fashioned explosives of a saturation bombing mission, the bullets of machine guns or, for that matter, a crossbow or a stone ax. It is war itself that is immoral, not the weapons used by warriors.—Kirtley F. Mather: The Problem of Antiscientific Trends Today, *Science* 115:534 (May 16) 1952.

CHRONIC DISEASES— A JOINT RESPONSIBILITY OF PRIVATE PRACTICE AND PUBLIC HEALTH

J. W. R. NORTON, M.D., M.P.H., F.A.C.P.*

RALEIGH

In the long span of recorded time 50 years is as the twinkling of an eye, but medical progress during this period has exceeded that of many prior centuries. Twenty-eight years after the establishment of the North Carolina State Board of Health, Dr. Cooper, in his chronological summary for 1905, just before the beginning of intensified joint efforts against communicable diseases, had this to say:

"General Assembly established State Laboratory of Hygiene; imposed water tax of \$64 on all public water companies; voted \$600 annually for the support of laboratory. Small appropriation made it necessary for the Department of Agriculture to continue to assist State Board of Health. Annual appropriation, \$2,000."

This year even the barest outline or summary of public health services provided by the state and the 69 local health departments serving all 100 counties would require many pages. Concurrently with the well known vast and rapid changes in the private practice of curative medicine has come similarly impressive progress in preventive medicine and public health. Through the years a few physicians have voiced fears that they would have no work if preventive measures were applied to all preventable ills and injuries. We heard such comments from a few with regard to vaccinations against smallpox, typhoid, diphtheria, whooping cough and tetanus; against the planned parenthood program, the school health program, and the venereal disease and tuberculosis control programs. We hear less of these short-sighted objections today, but there are a few who would limit public health services to the indigent and against only the communicable diseases.

With improved educational methods and more widespread use of preventive measures, prompt diagnosis and greatly improved treatment procedures, the communicable dis-

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*Secretary-Treasurer of the State Board of Health and State Health Officer.



ZACK D. OWENS, M.D.

eases, with the exception of tuberculosis, have been brought under relatively effective control. Recent examples are the Salk vaccine against poliomyelitis and certain antibiotics against rheumatic fever. The former Captain of the Men of Death, tuberculosis, has dropped until now it is not even among the first 10 killers, except in limited age groups.

Present-Day Challenges

In 1954 diseases of the heart and blood vessels, cancer, accidents, nephritis and diabetes accounted for 22,623 out of a total of 32,072 deaths in North Carolina. Mental disorders accounted for half of the persons hospitalized. Arthritis caused an enormous amount of disability and hospitalization. Improper nutrition caused decreased vitality and lowered efficiency in many. All these, except accidents, are in the field of noncommunicable or chronic disorders. Most medical leaders agree that much progress could be made against them by health education, early diagnosis, and prompt medical treatment and supervision.

We are now at about the same stage of medical knowledge regarding these chronic, noncommunicable disorders at which our predecessors found themselves when joint efforts of private practice and public health began to be coordinated against the communicable diseases. We are afforded the opportunity to proceed humanely and cooperatively, as was done so successfully against the infectious diseases.

When the Medical Society of North Carolina stimulated the establishment of the State Board of Health and local health departments, medical leaders considered the situation with regard to communicable diseases to be intolerable. Our successful joint efforts have prolonged the life span and helped to create the present intolerable situation with regard to the chronic, noncommunicable disorders, and our mechanical progress has contributed, at least in part, to our deplorable accident situation. Even such problems as rehabilitation and stream and atmosphere pollution should be of active concern to physicians in private practice and in public health. In one week in December, 1952, the London smog accounted for more deaths, even in proportion to the population, than occurred during any week of the great cholera epidemic of 1866.

What Is Being Done

Our state is fortunate to have an alert medical profession well represented on the state and local boards of health. We are one of the few states fully covered by sound local health departments. We have made a beginning in diagnosing cardiovascular disease. We have made a good start in finding cancer in the early stages when, in many cases, something can be done to control it. Harnett County has an excellent program of diabetes case-finding and supervision, and physicians throughout the state have cooperated in the annual week of diabetes case-finding. Cumberland County has started an obesity control service. Halifax, Harnett, and some of the other counties have had limited experience in multiple screening techniques.

The mental health services have been expanded recently along lines similar to the tuberculosis control work for early case-finding, guidance and post-hospitalization follow-up to prevent a breakdown. The nutrition service has been strengthened. A recent grant by the Kellogg Foundation has made possible the beginning of an intensive program against home and farm accidents. A program in cooperation with the Motor Vehicle Bureau has been stimulated by Cornell University consultants in a study of motor vehicle design as it may contribute to, or tend to prevent, serious crash injuries. Some progress in the treatment of arthritis, atherosclerosis and bursitis has been made, and there is increasing hope of enlarging our knowledge regarding their prevention. The Rural Health and Public Relations Committees have contributed in a fundamental way by laying the groundwork for a better understanding of, and a willingness and desire to proceed against, chronic disorders and accidents—just as was the case in earlier improved control of communicable diseases.

Conclusion

The work of the private practitioner will be just as ethical and much more satisfying as all chronic disorders are promptly diagnosed and control efforts are made more effective. Our state is in a strategic position to lead the way in combatting chronic, noncommunicable disorders and accidents, just as private practitioners and the public health team joined hands to pioneer in communicable disease control.

SURGICAL MANAGEMENT OF SOME PULMONARY INFECTIONS IN CHILDREN

RICHARD M. PETERS, M.D.
CHAPEL HILL

and

ISAAC V. MANLY, M.D.
RALEIGH

Pulmonary infections in children are not uncommon, and most of them are correctly treated medically without intensive study. Since very few intrathoracic structural defects result in a classic symptomatology, however, they rather produce varied secondary symptoms due to pressure or infection. For that reason, if pulmonary infections fail to resolve promptly under appropriate medical management, or if they tend to recur or to be accompanied by stridor, hemoptysis, persistent cough, or failure to regain weight, then serious consideration should be given to the possibility of a structural abnormality of the respiratory system and studies conducted to discover it. Since chronic or recurrent pulmonary disease may seriously retard the physical and emotional development of children, it is important to discover and correct any predisposing abnormalities promptly.

During the past 10 years thoracic surgery has become commonplace and safe. Its development has been as dependent on the accumulation of knowledge regarding the pathologic physiology of intrathoracic disease as on improvements in technique. In this regard the advances in anesthesia have been indispensable, while the advent of antibiotics has diminished the complications remarkably. These advances have been particularly striking in the pediatric age group.

The results of well planned thoracic surgical procedures in children are likely to be especially gratifying. Children lack the creeping degenerative processes that so often mar otherwise successful surgical results in old age. Their potential for growth is such that true hypertrophy with partial replacement of removed portions of the lung is possible⁽¹⁾, making correction of remediable defects especially desirable.

In the first 12 months following the opening of the North Carolina Memorial Hospital at Chapel Hill, 19 children have undergone

thoracotomy. This paper is concerned with a group of children with acute or chronic pulmonary sepsis who were found to have lesions amenable to surgical correction as a cause for the sepsis.

Case Reports

Case 1

A 13 month old white female infant was admitted through the emergency room of the North Carolina Memorial Hospital on May 2, 1953, in a critical condition marked by symptoms typical of croup. Since birth she had repeatedly had a croupy cough, and upper respiratory infections were always severe and prolonged. At 5 weeks and again at 7 months of age a diagnosis of "pneumonia" had been made because of similar, though less severe, symptoms which improved following the administration of penicillin and oxygen, but a moist cough and tracheal stridor continued. X-ray studies revealed a soft tissue mass posterior to the lower trachea, pushing the trachea forward and partially obstructing both major bronchi (figs. 1 and 2).

Penicillin effected resolution of pneumonitis in the right lower lobe, and on May 19, a left posterolateral thoracotomy was performed through the bed of the fourth rib. A bronchogenic cyst measuring about 4 by 4 cm. in diameter was found posterior to the trachea and adherent to the esophagus. The cyst was so intimately fused to the posterior membranous wall of the trachea that in dissecting it free a small rent was made in the trachea. This rent was closed with a transverse line of sutures. Histologic examination confirmed the diagnosis of bronchogenic cyst by revealing elements of cartilage, mucous glands, and smooth muscle in its wall, with ciliated columnar epithelium lining the cyst cavity.

The patient's postoperative course was benign, and roentgenograms revealed correction of the preoperative pressure defect of the trachea. Since discharge from the hospital, this infant occasionally has had moist cough, but no recurrences of the severe croupy cough.

Case 2

A 9 year old white girl had a febrile illness six months before admission, at which time an x-ray study of the chest showed a soft tissue mass in the anterior mediastinum, projecting into the left portion of the chest adjacent to the bifurcation of the trachea, and an area of pneumonia in the right lower lobe. Treatment with penicillin and chloromycetin resulted in resolution of the right lower lobe pneumonia, but the mass in the mediastinum persisted.

At the age of 18 months the patient had been treated at home for pneumonia with sulfonamides. Since birth she had had wheezing respirations during colds and following exertion, but never cyanosis or fainting. A physical examination was negative except for the neck, which was abnormally wide and short. Admission x-ray studies revealed the lung fields to be clear and the mass unchanged (figs. 3 and 4). Roentgenograms of the cervical spine showed multiple defects of the vertebrae.

On September 3, 1953, a thoracotomy was performed on the left through the bed of the fourth rib. A cystic structure measuring about 4 by 6 cm. in diameter was present in the left anterior mediastinum adjacent to the trachea. The left upper lobe of the lung had a small defect corresponding to the area occupied by the mass. In addition, the pericar-

From the Department of Surgery, School of Medicine, University of North Carolina, Chapel Hill, North Carolina.

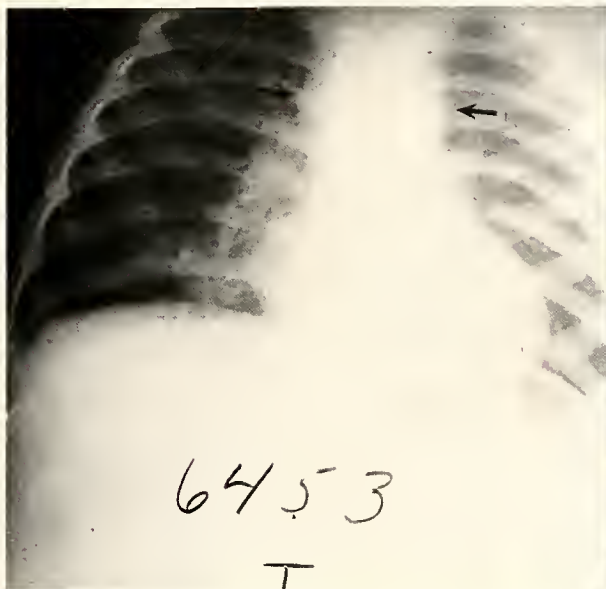


Fig. 1 (Case 1). Anterior-posterior roentgenogram of the chest showing upper mediastinal mass, indicated by arrows.



Fig. 2 (Case 1). Lateral view demonstration cyst posterior to lower trachea.

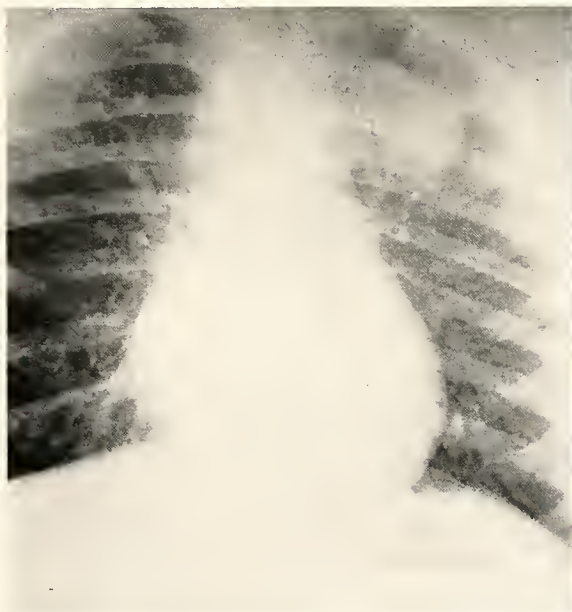


Fig. 3 (Case 2). Posterior-anterior roentgenogram taken on admission. The mediastinal mass is seen projecting into the left upper chest cavity.



Fig. 4 (Case 2). Lateral planogram shows the mediastinal cyst anterior to the trachea.

dium just posterior to the phrenic nerve and immediately adjacent to this cyst had a 4 by 4 cm. defect.

The cyst was dissected free and found to contain a cartilaginous ring at its proximal portion, and more proximal to this, it was connected to the posterior aspect of the lower trachea by an imperforate fibrous cord. The cyst was supplied by a segmental pulmonary artery arising from the first portion of the left pulmonary artery, and had numerous small venules draining into the systemic cir-

culatation. The neck of the cyst was ligated at the trachea, and the mass was resected. No attempt was made to close the pericardial defect.

Histologic examination confirmed the diagnosis of bronchogenic cyst, there being cartilage, smooth muscle, mucous glands, and ciliated columnar epithelium present.

This girl has been perfectly well since operation and has had several upper respiratory infections without pulmonary symptoms.



Fig. 5 (Case 3). Posterior-anterior view taken on admission revealing collapse and consolidation of the right lower lobe.

The first patient demonstrates vividly that, because of the small size of the infant trachea, mucosal swelling or pressure more easily produces symptoms of obstruction. Reduction of the tracheal lumen of the adult by 30 to 40 per cent may cause no serious symptoms, while in an infant severe respiratory embarrassment usually occurs. For this reason, obstructing lesions of the trachea must be more urgently dealt with. All infants with chronic wheezing and cough or repeated bronchopulmonary infections should be adequately studied to rule out tracheal narrowing.

There are several congenital anomalies and tumors that may produce pressure on the trachea in children. Bronchogenic cysts, esophageal duplications, dermoid cysts, cystic tumors of lymphatic and vascular origin, vascular ring, hypertrophy and tumors of the thymus, and tumors of lymphatic and neural origin are the most common. Some of these can be diagnosed preoperatively with a fair degree of accuracy. More often, exploratory thoracotomy is necessary to establish definitely the true nature of the lesion. When respiratory embarrassment due to tracheal obstruction is present, it is frequently wiser to proceed with exploratory thoracotomy and definitive surgical correction than to pursue diagnostic tests which might increase the symptoms of obstruction.



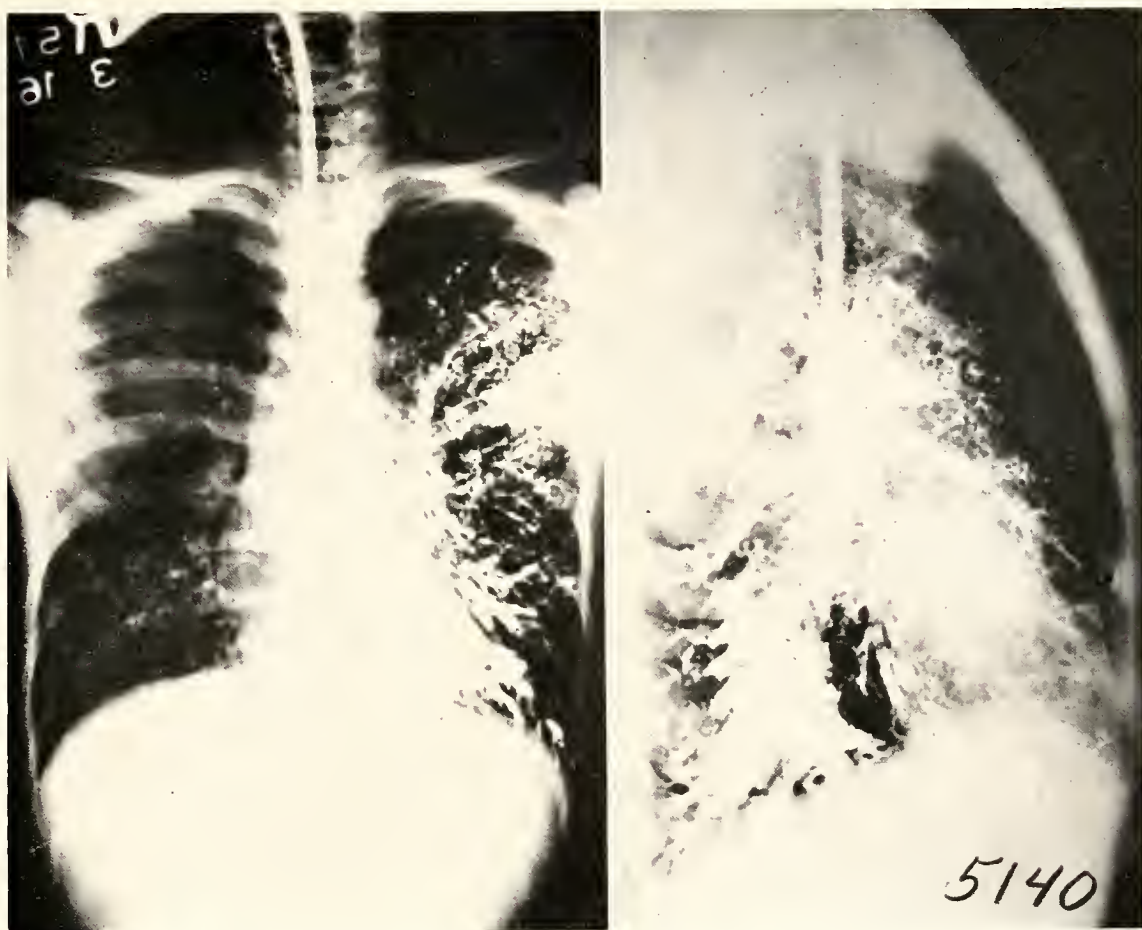
Fig. 6 (Case 3). Posterior-anterior roentgenogram taken on eighth postoperative day.

Case 3

An 8 year old white boy developed normally until nine months before admission, when he had "virus pneumonia" from which he recovered slowly. He continued to cough, producing a small amount of yellowish sputum. There was no history of foreign body aspiration. Two months before admission an upper respiratory infection developed, aggravating his cough, and one month before admission, following a severe bout of coughing, he had hemoptysis productive of "a cupful" of bright blood. Following this episode he began to produce copious quantities of foul, purulent sputum and had intermittent, low-grade fever.

Physical examination revealed a chronically ill boy who appeared younger than his stated age. His weight was 50 pounds, temperature 98 F., pulse 35, respiration 20. There was dullness and diminished breath sounds with rales in the right lower lung field. A tuberculin test was negative. The hemoglobin was 12.5 Gm., and the white blood count 15,200. X-ray examination of the chest showed complete collapse and consolidation of the right lower lobe (fig. 5). Bronchoscopy revealed pus exuding from all the basal bronchi on the right and no evidence of a foreign body. On February 5, 1953, a right lower lobectomy was performed. The removed lobe contained a large abscess into which all the basal bronchi opened. In addition there was secondary bronchiectasis and surrounding pneumonitis. Post-operative recovery was smooth (fig. 6). Nine months after the operation he had gained 6 pounds, had no cough, and showed no limitation of activity except that imposed by his mother. Fluoroscopy revealed both lung fields to be clear with adequate expansion and motion of the diaphragms.

The thoracic surgeon today sees a considerable number of cases of lung abscess or carcinomas which have been diagnosed as "virus" or "atypical pneumonia" and treated with varying amounts of antibiotics without adequate study. Chronicity not infrequently



Figs. 7 and 8 (Case 4). Posterior-anterior and lateral bronchograms demonstrating saccular bronchiectasis of the left lower lobe. The right side also was filled and was normal.

follows inadequate treatment of acute pneumonitis. Chronic, unresolving pneumonitides are serious problems at any age, and should be vigorously investigated and treated. It should always suggest a structural abnormality such as foreign body, bronchial stenosis, tumor or others. These underlying causes must be searched for with the aid of x-ray, bronchoscopy, bronchograms, or other tools that are at our disposal.

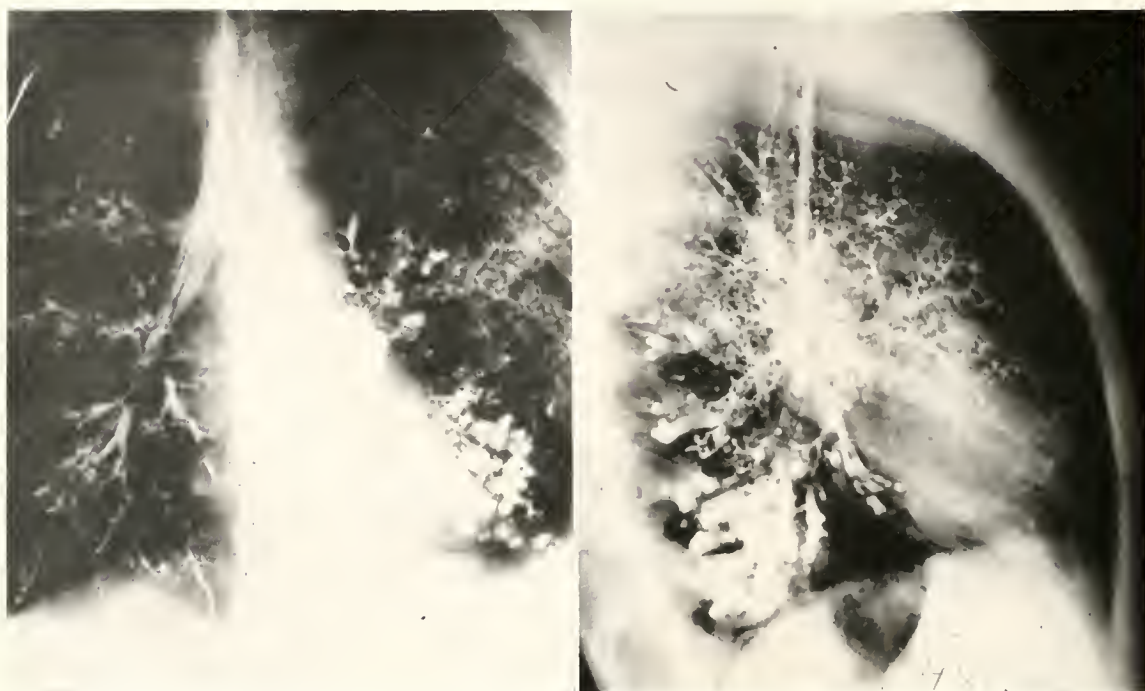
In former years acute lung abscesses were commonly treated by resecting segments of rib and establishing external drainage. Chronic fistulas, massive secondary hemorrhage, and brain abscesses not infrequently followed. With the early judicious use of antibiotics, it is not uncommon to induce complete healing of acute abscesses without surgery. It is unusual to effect healing without surgery in an abscess of more than three to six weeks' duration, and so it is imperative that antibiotics be started at the earliest pos-

sible moment after the diagnosis of lung abscess has been made. If healing fails to occur within three to six weeks, resection should be considered. In good risk patients covered by antibiotics, it is usually possible to resect primarily the abscessed portion of lung. Very rarely is open drainage necessary today.

The improvement in this boy resulting from extirpation of the abscessed lobe has been dramatic. He has gained weight and regained his vigor. As so often happens, his overzealous mother has been the greatest hindrance to return to full activity. Parents not infrequently require considerable encouragement to avoid continued "protection" of such patients.

Case 4

This 10 year old white boy was admitted to the North Carolina Memorial Hospital on March 16, 1953, with a diagnosis of bronchiectasis. Five months and again three months before admission he had had episodes accompanied by cough, generalized malaise and fever, which responded slowly to chemo-



Figs. 9 and 10 (Case 6). Posterior-anterior bronchograms showing bronchiectasis of all segments of left lower lobe. The lingula division of the left upper lobe filled poorly, as often happens with bronchiectasis.

therapy and left him chronically debilitated. At the age of $7\frac{1}{2}$ years he had had diphtheria, requiring a tracheostomy, and thereafter tired easily and seemed retarded in growth and development. Admission temperature was 99.9 F., pulse 120, respirations 20. The patient was noted to be small in stature, poorly nourished, and chronically ill. He had a slightly productive cough. There were moist, crackling rales over the left lower lobe posteriorly and in the left axilla. Hemoglobin was 15.5 Gm., white blood count 11,400. Tuberculin and fungus skin tests were negative. Bronchograms revealed saccular bronchiectasis confined to the left lower lobe (figs. 7 and 8).

On March 17 a left lower lobectomy was performed without incident. The specimen showed greatly dilated bronchi in all segments. These were filled with a necrotic and suppurative material. The terminal bronchioles were dilated approximately three to four times normal size. The only postoperative difficulty was splinting of the left portion of the chest, causing some scoliosis. This was overcome by physiotherapy designed to increase aeration of the operated side and by exercises to improve posture. He was discharged home on his tenth postoperative day and returned to school one month after operation. He gained 6 pounds in weight within one month of operation. Three months following operation he had no cough, was very active, and showed improvement in appetite, strength and general behavior. Examination, including fluoroscopy, revealed no scoliosis. Aeration on the operated side was excellent, and there were no rales in either lung field.

Case 5

This 17 year old boy had severe pertussis at 7 years of age, followed by frequent upper respiratory infections and "chest colds." For the past four years he had had a chronic productive cough, little energy

and easy fatigability, with failure to gain weight satisfactorily. His school work suffered seriously, and he failed three grades because of absences. Physical examination revealed an underdeveloped, thin, slightly apathetic boy, with deep, moist cough. The fingers were slightly clubbed. The tonsils were enlarged, and there were moist rales at both bases, more on the left.

Bronchograms performed at the Guilford County Sanatorium, Jamestown, North Carolina, by Dr. M. D. Bonner, revealed saccular bronchiectasis of all segments of the left lower lobe and lingula, and minimal dilatation of the posterior basal bronchus of the right lower lobe. X-ray films of the sinuses were clear. On June 29, 1953, a left lower lobectomy and lingulectomy were performed. Postoperative recovery was complicated by an air leak requiring tube drainage of the chest for 10 days. He had severe acute scoliosis owing to splinting the operated side, but with physiotherapy and active breathing exercises he has completely overcome this condition and now has excellent expansion of both chest cavities. His spine is now straight and lung fields are clear. He has gained 10 pounds during the six months since operation, and takes part in sports. He has a slight cough with upper respiratory infections, but this cough is now nonproductive.

Case 6

The patient, a 16 year old boy, has always been very active, but in the past two years he acquired a chronic, productive cough. He failed to gain any weight during the past year. Frequent upper respiratory infections accompanied by increase in sputum and sometimes by chills and fever occurred. At 2 years of age he had pertussis followed by "pneumonia," and had several episodes of influenza during childhood.

Physical examination revealed a well developed

and normal adolescent boy. There were moist rales at both lung bases. Bronchoscopy and bronchograms yielded findings consistent with bronchiectasis of all segments of the left lower lobe and the lingula of the left upper lobe (figs. 9 and 10). On June 16, 1953, a left lower lobectomy and lingulectomy were performed. During the first four months after operation he gained 3½ pounds and had no cough. He has continued to gain weight and is now active in sports.

Bradshaw, Putney and Clerf⁽²⁾ published a survey on the life expectancy of patients with bronchiectasis in 1941. Of 171 patients admitted to the Jefferson Medical College Hospital between 1925 and 1935, 59 (34.5 per cent) were dead from bronchiectasis or its complications by 1941. The average duration of life from the onset of symptoms was 13.5 years. Antibiotics and increasing interest and knowledge among physicians in the management of patients with chronic bronchial disease have undoubtedly improved this dismal prognosis, and have resulted in a diminution in the number of such cases progressing to complete destruction of lobes, chronic empyema, and early death. When bronchiectasis is localized sufficiently to allow surgical extirpation, it is of obvious benefit to the patient to remove the diseased areas. This type of surgery has become remarkably safe, and the results are frequently striking. To secure and maintain good results after extirpation of the bronchiectasis, it is imperative that any concomitant paranasal sinus infections be adequately controlled by proper surgery, preferably before operation on the lungs is undertaken.

As stated earlier, there is evidence that the lung continues to grow during childhood and that actual hypertrophy of the remaining lobes occurs when pulmonary resection is performed in children. Certainly children tolerate this type of surgery very well. Deformity of the chest and scoliosis do not occur in children after resection if normal activity is not curtailed. The aid which chemotherapy has afforded in preventing infections after lung surgery is graphically demonstrated by case 5. A bronchopleural fistula of 10 days' duration sealed without empyema.

The variable effects of bronchiectasis on the patient are illustrated by these three boys. Patient no. 6 had been able to lead a very active life until the year before operation, whereas the other two were retarded in growth and activity for several years. Patients who complain of relatively few

symptoms, but who come to operation because of chronic cough or recurring pneumonitis are very likely to notice a decided improvement in strength and well-being after resection of bronchiectatic lobes.

Summary

1. Pulmonary infections in children are not uncommon, and occasionally require surgical therapy.
2. Structural defects affecting the tracheo-bronchial tree are frequently responsible for recurring or chronic pulmonary sepsis. Adequate study and indicated surgery should be performed in such cases.
3. A group of cases of pulmonary infections in children treated surgically during the first 12 months of operation of the North Carolina Memorial Hospital at Chapel Hill is presented, together with comments relative to the problems encountered.
4. Thoracic surgery in children is now remarkably safe. When indications are sound, results are gratifying.

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Too much should not be expected from general population chest roentgenographic surveys. Certainly, many patients are diagnosed through surveys as having progressive disease. Placing them under medical supervision promptly may prolong or even save life. But "early diagnosis" is not synonymous with minimal disease and prevalence is far from synonymous with incidence. Analysis of the morbidity and mortality subsequent to original diagnosis is the test of the contribution mass chest roentgenographic surveys make to the tuberculosis case-finding program.—Wendell R. Ames, M.D., and Miller H. Schuck, M.D., *Am. Rev. Tuberc.*, July, 1953.

In general, patients with minimal pulmonary tuberculosis should not undergo chemotherapy, because most of them derive as much benefit from ordinary methods of treatment. In any event, the importance of correlating chemotherapy with other methods of treatment cannot be stressed too greatly. Chemotherapy is not a substitute for prolonged bed rest, and the proper timing of the addition of collapse therapy, when appropriate, should be planned in each case on an individual basis, at the outset.—William S. Schwartz, M.D., *The J.A.M.A.*, February 23, 1952.

TUMORS OF SYNOVIAL ORIGIN

FATMA HAFEZ ABDIN, D.M.Sc., M.D.

CAIRO, EGYPT

Synoviomas are tumors that arise from synovial lined structures—joints, bursas, and tendon sheaths. Because they are rare and difficult to classify, they were neglected by the pathologists for a long time.

It is now generally accepted that the synovial membrane is mesenchymal in origin. It is formed of two layers—the outer one fibrous, the inner one cellular. The inner layer is made up of flattened cells which were once thought to be endothelial cells. Recently Maximow and Bloom⁽¹⁾ described them as differentiated fibroblasts which secrete the viscid colorless liquid of the joint cavity. They may look cuboidal and resemble epithelium, especially when they are hyperplastic.

Smith⁽²⁾ was the first who used the term "synovioma" to include tumors which arise from all three synovial lined structures. Lejars and Rubens-Deval⁽³⁾, however, made the first real contribution to the classification of these tumors. According to these writers, two types of malignant tumors arise from synovial membranes. One type arises from the fibrous layer and is indistinguishable microscopically from the common fibrosarcomas. The other type arises from the epithelioid cells of the inner layer, and the pattern suggests synovial tissue as the origin of the tumor. Willis⁽⁴⁾ described two main types of synoviomas—benign and malignant. The former are small, varying from a few millimeters to about 2 to 3 cm. in diameter upon removal. They are non-invasive, and in his opinion, are readily cured by simple enucleation. At operation the tumors usually appear well encapsulated, but careful examination reveals attachment to deep structures⁽⁵⁾. The rate of growth of synoviomas is slow, and metastases may appear several years after removal of a malignant tumor. In Knox's case⁽⁶⁾ pulmonary metastases were discovered four years after the primary tumor was removed. Next to the lungs, the lymph nodes are the most common site of metastasis.

Synoviomas consist of lines and clumps of polyhedral and fusiform tumor cells and

densely collagenous matrix. Giant cells are often present. Lipoid and hemosiderin deposits are other common features. Willis supports the concept of Jaffe and his co-workers⁽⁷⁾ that these tumors, although they contain giant cells, do not resemble osteoclastoma of the bone and should not be called myeloid tumors, or myelomas, as was suggested by Geschickter and Copeland. Wright stated that the giant cells are seldom as numerous or as large as those seen in osteoclastoma and, unlike them, are focally distributed; however, since they were present in every case he examined he named these tumors "benign giant cell synoviomas."

The most characteristic feature of these tumors is the presence of clefts and spaces, which may be seen on gross examination. These spaces are lined by cubical, columnar, or flattened cells and contain glairy mucoid fluid, though they may appear empty in histologic sections. Wright⁽⁵⁾ found such spaces in varying degree and number in nearly all the 81 cases microscopically studied by him. Some synoviomas, on careful examination, may also reveal solid groups of fusiform or epithelioid cells concentrically arranged and surrounded by mucoid substance. Papillary processes covered by one or several layers of mesothelial cells are concentrically arranged and surrounded by mucoid substance. Papillary processes covered by one or several layers of mesothelial cells are again a characteristic feature of synoviomas, especially the malignant forms. Johnson⁽⁸⁾ pointed out the possibility of confusing such tumors with villous arthritis.

Case Reports

Case 1

Eight years prior to the present examination a 52 year old man had noticed a gradually increasing enlargement on the dorsal surface of the right foot. It was painless, and when removed after five years was the size of a nut (1½ by 2½ cm.). It was well encapsulated and was easily shelled out. The swelling recurred after three months, and attained the original size within eight months. On removal it was noticed to be partially attached to the tendon sheath of the extensor muscle of the toes. Within 15 days it recurred again, and in two months had attained the size of a large almond. It was not painful, but was tender on pressure.

Histologic studies showed that the first tumor resembled a soft cellular fibroma and the second a fibrosarcoma. On careful examination small spaces lined by cuboidal cells and containing papillary processes were seen. The third tumor showed the same picture, but was still more cellular and contained more mitotic figures. There was infiltration of the capsule.

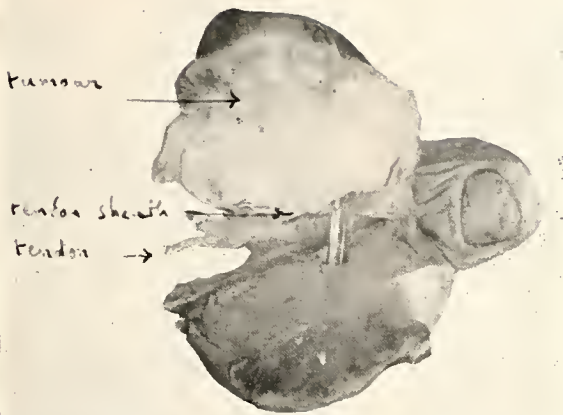


Fig. 1. Synovioma arising from the dorsal surface of the big toe.

Case 2

A woman, aged 25 years, complained of a swelling on the dorsum of the big toe. It had appeared two years after an injury and had gradually enlarged until it reached the size of a lemon (5 cm. in diameter). At operation the tumor was found to be attached to the tendon of the extensor hallucis longus, and it was necessary to remove the toe. On cut section the tumor was yellow in color, firm in consistency, with well defined edges. It arose from the tendon sheath and extended upward along the sheath (fig. 1).

On histologic examination the tumor was found to be ulcerated and secondarily infected. It was partly covered by stratified squamous epithelium which was definitely invaded by the growth. The tumor was composed of spindle cells and numerous giant cells containing 2 to 10 nuclei. Some cells were large and vacuolated because of their previous lipid content, which explained the yellow color seen on gross examination. Small clefts lined by swollen endothelial cells were also seen throughout the tumor. The tumor was vascular and contained hemosiderin granules. Sections stained with silver showed brown fibrils separating groups of cells and surrounding individual cells.

Case 3

A 35 year old man had a small rounded swelling, 1½ cm. in diameter, attached to the tendon of the flexor of the little finger; the surface of this growth was ulcerated. The finger was amputated, and dissection showed a firm, gray tumor surrounding the tendon sheath and blending with it. Histologically, the tumor consisted of lines and clumps of small polyhedral and fusiform tumor cells and elongated clefts. No capsule was present, and the tumor cells had infiltrated the skin.

Case 4

In this patient, a 40 year old man, a swelling of the thumb had been present for a short while. It was firm and slightly mobile, and was related to the tendon of the flexor pollicis. At operation it was yellow and was seen to arise from the tendon sheath. Histologic examination showed bands of

fibrous tissue and cells indistinguishable from fibroblasts. In certain areas, however, the cells were epithelioid in character and tended to be arranged in clumps. Some were pale and foamy, their lipid being dissolved in xylol. Numerous large giant cells containing 6 to 15 nuclei were present. Some of them resembled the giant cells of osteoclastoma. Spaces containing and lined by actively proliferating cells and one or more giant cells were present (fig. 2). A few contained papillary-like processes.

Case 5

This patient, a 35 year old man, had a small swelling (2½ by 1½ by 1½ cm.) related to the extensor tendon of the thumb. This represented a recurrence of a growth removed three years previously. Microscopic examination after its removal the second time showed groups of polygonal cells with large vesicular nuclei and definite nucleoli. Giant cells containing 8 to 25 nuclei and elongated clefts surrounded by cuboidal cells were also present. The groups of cells were surrounded by thick bundles of collagenous fibers, which also tended to form a capsule around the tumor. This apparent capsule was, however, infiltrated by the tumor cells.

Case 6

A male patient, 19 years of age, complained of a swelling on the dorsum of the hand of 10 months' duration. It was attached to the extensor tendon and had well defined edges. It could be moved from side to side but not up and down. The tentative clinical diagnosis was chondroma of the extensor sheath. Histologic examination after removal of the tumor

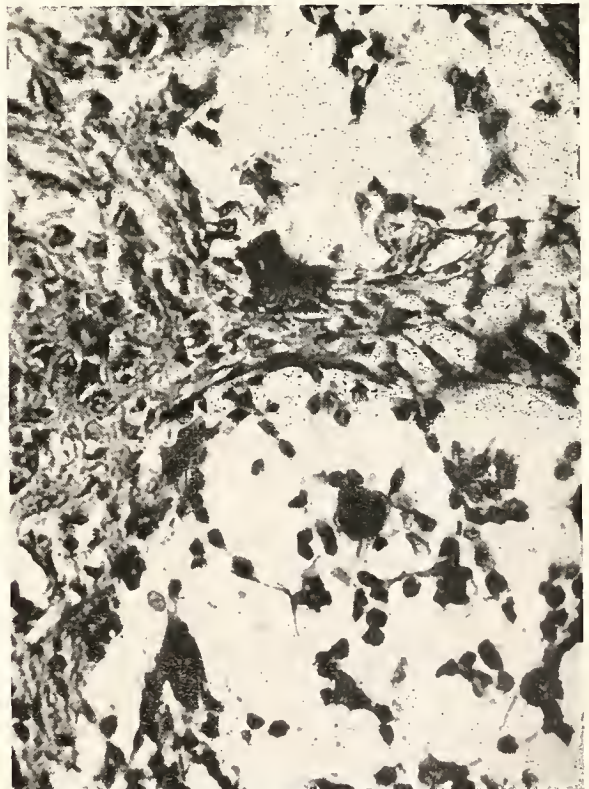


Fig. 2. High power magnification (x 350) of a synovial space, with a giant cell forming part of the lining.



Fig. 3. High-power magnification (x400) showing the oval and spindle-shaped cells resembling spindle-cell sarcoma.

showed a picture suggestive of hard fibroma with thick bands of fibrous tissue and fibroblasts. Giant cells containing four to seven nuclei, and small spaces lined by cuboidal cells were found after careful search, and suggested the diagnosis of fibrous synovium.

Case 7

A 28 year old carpenter was first admitted to Kasr El-Eini Hospital in January, 1951, complaining of a painful swelling of the thigh which had been present for three months. No history of trauma or syphilis could be obtained. Examination revealed a swelling on the medial aspect of the thigh, extending posteriorly in the popliteal space. It was firm in some areas, but fluctuant in others. It was attached to the muscles and blood vessels, but not to the bone or posterior aspect of the joint. The posterior tibial pulse was felt, and the nerves were intact. No inguinal glands were felt. A provisional diagnosis of fibrosarcoma of the vastus medialis with degeneration was made. The possibility of tuberculous popliteal glands with caseation and liquefaction was also considered. Roentgen examination revealed a soft tissue swelling related to the medial side of the femur.

The mass was excised with difficulty because of its size and adherence to the back of the joint capsule. During the operation whitish material was expressed from the tumor and was thought to be tuberculous pus. The mass was examined histologically, but no diagnosis could be made.

In July, 1951, the patient was readmitted with a recurrence of the mass. A second excision of the tumor was performed, and at this operation the



Fig. 4. The swelling is present in the popliteal space and middle third of the thigh.

mass was found to be adherent to the femur and to the synovial membrane of the knee joint. The diagnosis of synovium was suggested.

On pathologic examination the mass was large (3 by 4 inches) and yellowish in color, presenting areas of degeneration. The report of the microscopic study was as follows: "The specimen is a highly cellular malignant synovium. The tumor shows papillary processes formed of fibrous tissue cores and surrounded by many layers of cells. The picture somewhat resembles that of disordered papillary adenocarcinoma, but the cells are not epithelial. They appear similar to those of a diffusely cellular sarcoma (fig. 3), being separate and mostly oval. Some, however, are fusiform, rounded, or polygonal. The cells have little bluish cytoplasm and vesicular nuclei. Mitotic figures are present but not numerous. Cystic spaces lined by flattened cells can be seen in some blocks of the tumor, but not in others. There is a very fine stroma of reticulin fibers, demonstrated by Foot's silver stain, between the individual cells. There is invasion of the capsule by the tumor cells and infiltration of the surrounding muscles, which appear degenerated."

The patient was advised to have his limb amputated, but refused to do so and was discharged. In December, 1951, he was admitted for the third time complaining of pain and recurrence of the swelling in the thigh. By the end of the month the pain was so severe that he continually asked for sedatives. Examination revealed a swelling (fig. 4), partly cystic and partly firm, on the posterior and medial aspects of the thigh in its middle and lower thirds. Roentgen examination was reported as showing

chronic sclerosis of cortex with irregular spiky bone formation, soft tissue swelling but not yet malignant growth. The chest was negative. A hind quarter amputation was performed by Professor S. Shalaby. Following operation the patient gained weight and learned to walk with crutches.

The pathologic report was as follows: "Macroscopic: A longitudinal section in the thigh and knee joint shows a large (25 by 7 by 5 cm.) oblong flattened lobulated fleshy mass. It is present mainly in the posterior and medial aspect of the middle and lower thirds of the thigh. It appears encapsulated, but the capsule is adherent to the surrounding structures—namely, muscles, posterior aspect of the capsule of the knee joint, and femur. There is no apparent bony destruction or infiltration. On cut section the tumor is opaque, yellowish white, and homogeneous. Areas of necrosis, hemorrhages, and cystic spaces are occasionally present. Glands along the femoral artery are found infiltrated by the same tissue. Microscopic examination of both tumor and glands show the same picture, with the papillary formation and cystic spaces equally pronounced, and thus confirm the previous diagnosis of malignant synovioma."

In September, 1953, the patient returned with a metastatic deposit in the bones of the skull.

Case 8

A man aged 27 years was admitted to Kasr El-Eini Hospital on July 19, 1952, complaining of a painful swelling in the popliteal space. It had been removed one year previously, but had recurred soon after the operation.

Examination revealed a rounded firm swelling, the size of an orange. Pressure on this mass, produced pain radiating down the leg. The mass could be moved from side to side but not up and down. The knee joint was free except for the mechanical blockage, which prevented full flexion. No glands were palpable in the groin. A blood count prior to operation showed only 2,800 white blood cells, with 4 per cent eosinophil, 8 per cent staff nucleated, 52 per cent segmented, 28 per cent polymorphonuclear, and 8 per cent monocyte. No roentgen examination was done, as the swelling was not attached to the bone.

At operation on August 10, 1952, the tumor was easily shelled out except in the anterior portion, which was adherent to the capsule of the knee joint; posteriorly the nerves were stretched on its surface. A provisional diagnosis of neurosarcoma was made.

Pathologic examination showed a firm, nodular, white growth, 10 by 6 by 6 cm., which appeared encapsulated. On cut section opaque white nodules, separated by grayish-white translucent fibrous tissue, were seen. There was no gross evidence of necrosis or hemorrhage. On careful examination, small cystic spaces filled with gelatinous material could be seen. Histologic studies revealed papillary processes covered by one or several layers of oval cells and projecting into the lumen of large spaces which contained a homogeneous, pink-staining material. In certain areas the picture resembled spindle cell sarcoma with areas of myxomatous degeneration.

Case 9

This patient, a 70 year old man, gave a history of trauma to the left knee joint one month previously, followed by a painful swelling which had been gradually enlarging ever since. On examination the swelling was hot, tender, fluctuant and well defined. The skin was inflamed, but not ulcerated or infil-

trated. The condition was clinically diagnosed as "chronic hemorrhagic prepatellar bursitis."

Following excision of the mass, the pathologic studies showed it to contain clotted blood, with small papillary processes in some areas. Microscopically, the tumor consisted of groups of cuboidal or polygonal cells with very large nuclei, prominent nucleoli, and many mitotic figures. The tumor was highly vascular, with patches of hemorrhage, necrosis and acute inflammation. The picture superficially resembled an angio-endothelioma and in some fields an anaplastic carcinoma; however, fibrous septa surrounded by these cells formed papillary processes and projected into the lumen of large spaces. Numerous small spaces containing some mucoid material were also visible. In other areas the cells appeared columnar and surrounded small empty spaces, giving a glandular appearance. Silver-stained sections showed fine reticulin fibers surrounding individual cells. Atrophic and infiltrated bony specules were present in the peripheral portions of the mass. The picture, gross and microscopic, was compatible with malignant synovioma.

Case 10

A 30 year old woman complained of a painless swelling at the back of her elbow. It was found to be attached to the triceps tendon, and was diagnosed provisionally as osteoclastoma.

The pathologic report following removal of the tumor was as follows: "The specimen is an oval (5 by 3 by 3 cm.) firm swelling adherent to the skin which has been removed with the tumor. Cut section shows white areas separated by bands of fibrous tissue. The tumor is hemorrhagic in parts. Small cystic spaces and clefts partly filled with mucoid substances are surrounded by actively growing large cells with many mitotic figures. In some areas they appear as epithelial cells and the tumor may superficially resemble an anaplastic carcinoma. Silver-stained sections show fine reticulin fibers surrounding individual cells. In other areas the cells have sarcomatous characters. These cells are mesothelial in nature. Myxomatous degeneration is also present. Giant cells with two to eight nuclei are scattered in the tumor. It is partly surrounded by fibrous tissue with septa projecting inside it, but no definite capsule."

Comment

Age and Sex

Of the 10 tumors under discussion, eight appeared between the ages of 25 and 40, one at 44, and one at 70. Eight were in males and two in females. Knox⁽⁶⁾ and Fisher⁽⁹⁾ have reported that tumors of synovial origin, whether benign or malignant, occur with about equal frequency in men and women. Wright⁽⁵⁾ found them more frequent in the female. Haagensen and Stout⁽¹⁰⁾, in an analysis of 704 reported cases, found that males preponderate in a ratio of 3:2.

Site

Wright, in a study of the 85 cases of benign giant cell synovioma, found that the hand was the site of tumor in 86 per cent of these cases.

Willis⁽⁴⁾ stated that in about half the cases of malignant synovioma the growth arises in the region of the knee joint; less often the tumor may appear in the ankle region and foot, or in the forearm, wrist, elbow and thigh. My colleague, Dr. Elwi⁽¹¹⁾, reported a case in the upper end of the humerus.

The first 6 cases reported above arose in a tendon sheath either in the hand (4 cases) or foot (2 cases). Five of them showed the picture of giant cell synovioma. The sixth cases (case 1) showed the picture of synovioma sarcoma. Three cases (7, 8, and 9) were associated with the knee joint. In 2 of these cases the tumors were attached to the capsule and projected externally. The fact that they did not invade the cavity, even though they attained a large size, suggests that they arose from a cyst in the capsule rather than from the joint itself. In the third case the tumor arose in the prepatellar bursa. Case 10 was related to the elbow joint. These 4 cases showed the typical picture of synovial sarcoma, with cystic spaces containing mucoid substance and papillary processes projecting inside them.

Diagnosis

Synoviomias are difficult to diagnose before operation. There is nothing characteristic about the history or clinical examination in such cases. Briggs⁽¹²⁾ reported 9 cases, in none of which the tumor was clinically diagnosed prior to operation. Attachment to synovial membranes, however, especially to the membranes of tendon sheaths, is important in diagnosis. Such an attachment can usually be suggested clinically and demonstrated at operation, as was the case with the first 6 tumors reported above. In cases 7 and 8 tumors were noticed to be attached to the capsule of the knee joint and in the ninth it was in the prepatellar bursa. All the tumors were encapsulated on gross examination. All except two were firm and fleshy; these two were fluctuant and cystic. On cut section they were usually whitish (7 cases) although two were yellow and one was reddish and white.

In 2 cases papillary processes and cystic spaces were seen on gross examination, and they were always present microscopically. If spaces contain mucoid substance or are

lined by cubical cells or have definite papillary processes projecting inside them, they can safely be diagnosed as synovial spaces; sometimes, however, they were small and lined by flattened cells, and looked like vascular spaces. Bellamy⁽¹³⁾ described them as blood spaces lined by proliferated endothelial cells and often containing giant cells. These spaces are important in the diagnosis of synoviomias.

Sometimes the whole tumor is represented by a cyst. Case 9 was diagnosed clinically as "chronic hemorrhagic bursitis of the prepatellar bursa." A case reported by Hutchison and Kling⁽¹⁴⁾, and 3 out of the 9 cases reported by Briggs were diagnosed at first as benign cysts, and only on microscopic study was the true nature of the tumor discovered. Thus whenever a cyst or a cystic tumor is removed from a site common to a bursal cyst, and especially if the cyst is found to contain blood instead of clear fluid, the possibility of synovioma should be considered. If histologically the lining is found to be cellular and to show papillary processes, the diagnosis is established. Such processes were seen grossly in the malignant synovioma of the prepatellar bursa. Briggs was struck by the characteristic papillary processes present in the 9 synoviomias, and they were evident in 5 out of 10 cases under discussion. If they are present, one usually diagnoses the tumor as synovial sarcoma. Giant cells are often found and are of help in the diagnosis, especially in the absence of papillary processes. They have given these tumors the names "giant-cell synovioma"⁽¹⁵⁾ and "extraosseous giant cell tumors."

Infiltration of the bone was demonstrated microscopically in only one tumor (case 9). In other cases the bones were not involved except for some rarefaction due to atrophy caused by pressure of some of the tumors. Involvement of bone has been rare in the cases previously reported in the literature.

Prognosis and treatment

There is no universal agreement about the treatment of such tumors. Willis believes that benign synoviomias are easily cured by simple enucleation. Briggs recommends that whenever the tumor appears encapsulated and can be completely excised with a margin of healthy tissue, this should be the method of choice. He had a patient treated in this way who was well seven years later. In the

104 cases studied by Haagensen and Stout, however, this was the only case cured by such a measure. I am inclined to believe that most of the so-called benign cases are at least locally malignant. Of the 10 cases reported here, the last four tumors were highly malignant. The first recurred twice after excision, the second and third infiltrated the skin, causing ulcerations, and the fifth recurred once. In the fourth and the sixth cases the tumors were removed only a few months ago. Careful histologic examination showed infiltration of the capsule in 9 cases. It is worth noting that even the very small easily shelled tumors recurred. I believe that the only benign tumor in the above 10 cases reported above is the fibrous synoviuma (case 6).

Wright followed 54 cases of his 85 benign giant-cell synoviumas after excision of the tumor, and found recurrences in 23 cases (44 per cent); in 3 of these the tumor had recurred twice. Only 3 of Haagensen's series of 104 cases were clinically cured—that is, from evidence of recurrence or metastases for five years. These tumors are not radiosensitive. Amputation after simple biopsy may thus be considered the best method of treatment, except perhaps for the fibrous type of synoviuma (case 6). This is also the belief of Haagensen and Stout, who advised radical treatment, with high amputation and possibly regional node dissection.

Acknowledgment

The author is grateful to the following for help in preparing this paper: Drs. S. Shalaby, Abdel Shati, Mahdi El-Mangouri, Omar Askar, and Coy C. Carpenter (visiting professor of pathology) of the Kasr El Aini Faculty of Medicine, Cairo, Egypt.

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INTERSTITIAL EMPHYSEMA OF THE LUNGS*

SAMUEL RICHMAN, M.D.

GREENSBORO

This report is stimulated by a case of interstitial emphysema of the lungs recently reported by Herrnheiser and Whitehead⁽¹⁾ in which the diagnosis was verified, apparently for the first time, at autopsy. Hamman⁽²⁾ first described this condition and believed that it often follows trauma to the chest and may occur without fracture of the ribs or lacerations of the lungs. Westermarck⁽³⁾ has stated that interstitial emphysema is caused by the rupture of a bronchus or of the more central alveoli. Trauma to the chest with the tendency to "hold the breath" may result in a sudden increase of intra-alveolar tension and possibly rupture of the alveolar walls. A cavity would be created by the retraction of the ruptured alveolar elastic fibers, and continued respiration could then produce a radiologically visible air-cyst in the lung.

Case Report

A Negro man, aged 35 years, was injured in an automobile accident on February 15, 1953. He was admitted by transfer into our hospital on the following day complaining of neck, back and shoulder pain, and also of hemoptysis. Physical examination revealed tenderness over the mid-cervical region, pain on motion of the head and neck, pain in the mid-dorsal region on lateral compression of the chest, and tenderness over the dorsal and upper lumbar spine, with pain on motion of the back. Examination of the chest was normal.

Roentgen examination revealed fractures of the vertebral ends of the left fifth to ninth ribs inclusive, and a compression fracture of lumbar 1 and 2. The lungs and pleural spaces appeared normal on the chest film. On the anterior-posterior thoracic spine film, a

*This material was collected while the author was Chief, Radiological Service, McGuire Veterans Administration Hospital, Richmond, Virginia.



Figure 1

semi-circular shaped area of radiolucency, 6.0 cm. in vertical diameter, extending from the ninth to the eleventh ribs posteriorly, to the left of the mid-line, was demonstrated clearly (fig. 1). The lateral border of this area was convex laterally and sharply defined.

This radiolucent area was immediately to the left and apparently anterior to the esophagus, and did not communicate with this structure (fig. 2). There was no diaphragmatic hernia.

Examination of the chest two weeks and again two months after admission no longer revealed this zone of radiolucency.

The patient was placed on bed rest for two weeks, after which a body cast was applied. He improved rapidly and was discharged from the hospital in four weeks.

Summary

Interstitial emphysema of the lungs apparently is seldom manifested roentgenologically. It has been stated that it may occur spontaneously without trauma and disappear after several days.

One case of interstitial emphysema of the lungs occurring after severe trauma to the



Figure 2

chest is reported. The roentgen findings of this condition are presented.

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The role of scientists: Those best able to formulate the policies under which scientists do their research and teaching and make their social contributions are scientists themselves. Accordingly, a second need to which I have referred is for more scientists as trustees of our universities and research institutions and as administrators of governmental and private organizations concerned with science and technology. There is need for more scientists in the higher levels of government.

One of the basic and admirable characteristics of our culture is the traditional willingness of public spirited men and women to give their unselfish service to the furtherance of our free institutions, as trustees of our heritage and our future. So, too, is self-sacrificing service to the affairs of democratic government. If these traditions are to be adapted to the requirements of our present culture, more scientists, engineers, and physicians should be on boards of trustees and in the legislature and executive branches of government.—Bronk, D. W.: *The Role of Scientists in the Furtherance of Science*, *Science* 119:223 (February 19) 1954.

INTESTINAL POLYPOSIS ASSOCIATED WITH ABNORMAL PIGMENTATION OF THE MUCOUS MEMBRANES AND SKIN

Peutz-Jeghers Syndrome

FRANK SOHMER, M.D.*

and

DAVID CAYER, M.D.

WINSTON-SALEM

In 1949 Jeghers reviewed a clinical entity consisting of intestinal polyposis associated with abnormal pigmentation of the skin and mucous membranes⁽¹⁾. Since this comprehensive survey, additional cases have been recognized and reported⁽²⁾. The hereditary nature of this syndrome has been established, although sporadic cases have been noted.

This disorder is sufficiently rare and interesting to justify the following case report.

Case Report

A 37 year old white single farmer was admitted to the North Carolina Baptist Hospital March 25, 1954, for evaluation of recurring periumbilical colic of three years' duration. This discomfort occurred most frequently in the morning. Eating produced nausea, which was relieved by vomiting. The discomfort was present much of the time and had increased in intensity during the previous year. No hematemesis or melena had been noted. A 20-pound weight loss had occurred during the preceding six months. The patient noted weakness and constipation one month before admission.

The available family history revealed all siblings to be living. Two sisters were asymptomatic. Two brothers were said to have "ulcers."

Physical examination

Physical examination revealed a well developed thin pale man who appeared older than his stated age. Small discrete pigmented areas were noted on the lower lip, about the mouth and the lower eyelids, and the dorsal and plantar surfaces of the hands (fig. 1). Similar pigmentation was present over the buccal mucosa. A polyp was felt approximately 5 cm. inside the rectal sphincter. Sigmoidoscopic examination showed multiple sessile and pedunculated polyps measuring 1 to 2 cm. in diameter scattered throughout



Fig. 1. Note tiny discrete areas of pigmentation, most marked about the lower eyelids, mouth and fingers.

the rectum and rectosigmoid. An ulcerated fungating polyp, 3 cm. in diameter, was visualized 20 cm. from the sphincter. The remainder of the general examination was not remarkable.

Accessory clinical findings

The urinalysis revealed no abnormality. The hemoglobin was 6.8 Gm. The guaiac test on the stool was positive for occult blood. Gastric analysis revealed 18 units of free hydrochloric acid. A cholecystogram showed good function. No stones were visualized. A barium study of the upper digestive tract revealed thickened folds in the fundus of the stomach. Hourly progress films showed the small bowel to be dilated (fig. 2A). Several filling defects were noted. Retrograde filling of the colon with barium revealed several large filling defects (fig. 2B), one of which measured 4 cm. in diameter. Examination of the right colon was not satisfactory because of narrowing of the midtransverse colon.

From the Department of Medicine, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

*Trainee, National Institute of Health, U. S. Public Health Service.



Fig. 2 A. Eight and one-half hour progress film showing small bowel obstruction.



Fig. 2 B. Air contrast examination of the colon showing polypoid filling defects.

Course in the hospital

The patient continued to have abdominal discomfort after admission. The hemoglobin level rose to 15.4 Gm. per 100 cc. following the administration of 4,000 cc. of whole blood over a 10-day period.

Exploratory laparotomy on April 6, 1954, revealed an area of intussusception about a 4 cm. polyp in the mid-jejunum. Several intraluminal masses were palpated between the ligament of Treitz and the ileocecal valve. Many similar areas were noted in the left half of the colon. Serosal changes in the rectosigmoid suggested malignant change. An abdominoperineal left colectomy, transverse colostomy, and excision of a jejunal polyp were performed. Pathologic examination revealed an adenocarcinoma arising in an adenoma of the left colon (fig. 3). Other biopsy specimens revealed only multiple adenomatous polyps involving the small and large intestine.

On April 30, 1954, a second celiotomy was done. A large intraluminal cecal mass was excised, along with a segment of gangrenous jejunum which had herniated into the re-

troperitoneal space. In addition, other individual polyps were removed from the small bowel. Pathologic examination demonstrated malignant change in the cecal polyp.

Following surgery the patient began to have fever and right upper quadrant pain. Dehiscence of the abdominal wound occurred on the eleventh postoperative day. A right subphrenic abscess and a left pelvic abscess were found and drained. Fever and profuse wound drainage persisted. The patient's course was further complicated by a second wound dehiscence and development of a fecal fistula. His course was progressively downhill, and he expired on the seventieth hospital day.

Additional findings at autopsy included generalized peritonitis, subacute pericarditis, and an external jejunal fistula. *Pseudomonas aeruginosa* and *Proteus vulgaris* were cultured from the heart's blood and the peritoneal cavity.

Comment

Disseminated intestinal polyposis is uncommon. In the hereditary disorder de-

scribed, the finding of melanin spots in the mucous membranes of the mouth and about the lips, eyes, and nares as well as the dorsal and volar surfaces of the hands and feet is highly suggestive of this syndrome. The pigmentation is usually darker than freckles. The distribution is distinctive and may be present at birth.

An awareness of the association of this unusual pigmentation with intestinal polypoidosis should stimulate careful study of such

persons and result in prompt diagnosis before the development of recurrent abdominal pain, intestinal obstruction, or bleeding. Early recognition is essential, since the adenomas often undergo malignant degeneration.

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HODGKIN'S PARAGRANULOMA MASKED BY FRIEDLANDER'S PNEUMONIA

Report of a Case

MAX GAHWYLER, M.D.

and

JOHN R. BUMGARNER, M.D.

BLACK MOUNTAIN

Chronic Friedlander's pneumonia has been cited as a factor commonly present in chronic sinusitis, chronic bronchitis, and bronchiectasis⁽¹⁾. Friedlander's pneumonia is also frequently found in patients suffering from general debility due to other disease. It is also common in chronic alcoholics⁽²⁾.

The following case demonstrates a proven case of Hodgkin's paragranuloma with superimposed Friedlander's pneumonia. No causal relationship is suggested. The case is presented for its interesting features. No similar case was found in the literature.

Case Report

A 60 year old white woman was admitted to this hospital on September 30, 1954. The symptoms of her present disease go back for several years. She had always been underweight and undernourished, and small infections caused debilitation, nausea, vomiting, anorexia, with prolonged episodes of elevated temperature, requiring frequent hospitalization. She had had chronic cystitis intermittently, with one episode of hematuria four or five years ago.

Past history

The patient had never been seriously ill until the onset of the present symptoms



Fig. 3. Surgical specimen (left part of colon) showing multiple polyps and area of malignant degeneration.



Fig. 1. Roentgenogram (August 18, 1954) shows the tumor mass above the left hilum. This film was taken prior to the patient's febrile episode.



Fig. 2. Roentgenogram of October 2, 1954, shows extension of the lesion shortly after admission. Note infiltrative changes in both lower lung fields.

which led finally to hospitalization in this institution. She had had 10 pregnancies, 9 of which were normal, and all 9 children were living. There was one abortion at two and a half months of pregnancy. The time of the menarche is not known, and the menopause had occurred precociously at the age of 33. Menstrual periods had always been normal.

The laboratory findings, including x-ray and fluoroscopic, during the patient's frequent hospitalizations were apparently always within normal limits. Blood transfusions met with no response. Three years ago when she was again symptomatic, a trial of cortisone produced remarkable improvement in her general feeling. She was given small maintenance doses ranging from 12.5 to 37.5 mg. daily for the past three years. The fact that she was taking as much as 75 to 150 mg. daily was withheld from her private physician as well as from the hospital staff here until the sixth week of her hospital course. In October, 1953, this patient had a cold, accompanied by wheezing and rales, and x-ray findings were consistent with the picture of bronchopneumonia. Radiologic follow-

up showed an unsatisfactory resolution. In August of 1954 a routine examination disclosed a new lesion above the left hilum, close to the mediastinum, which was first thought to be an extension of the previous condition. A reexamination in the middle of September showed a considerable extension of the previously noted lesion, which formed a homogeneous triangle of density from above the left hilum to the apex. The density was continuous with the mediastinal structures. The patient had a fever of 99 to 102 F., and hospitalization was advised. Shortly before her admission she discontinued cortisone completely, on her own initiative, without noticing any new symptoms.

Physical findings

A systemic review was entirely negative except for the aforementioned facts. Physical examination on admission showed an undernourished 60 year old white woman who appeared chronically ill. The temperature was 101 F., pulse 84, blood pressure 90 systolic, 60 diastolic. The physical findings were limited entirely to the left upper region of the

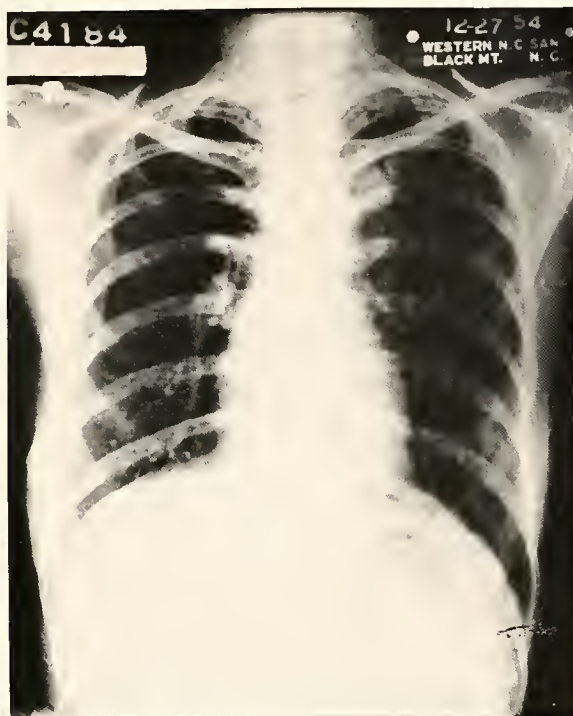


Fig. 3. Roentgeogram made December 27, 1954, three weeks after the first course of nitrogen mustard.

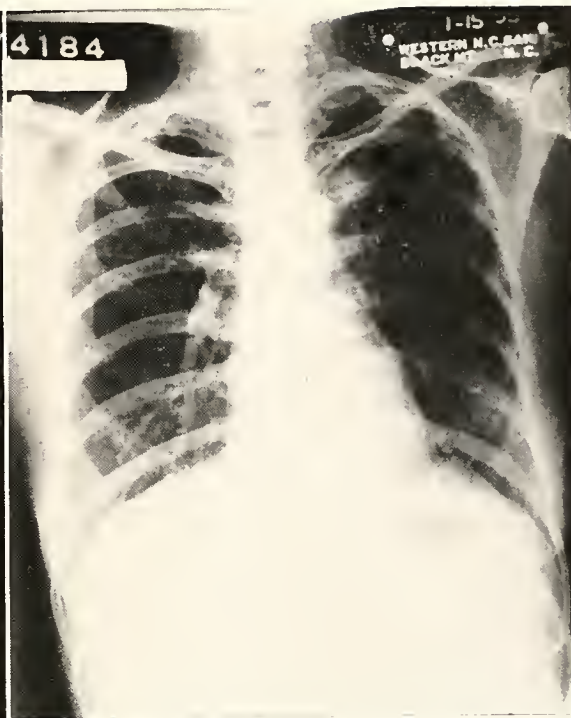


Fig. 4. Roentgenogram made January 15, 1955, ten days after second course of nitrogen mustard.

chest, where some dullness and moist rales were audible. No palpable lymph nodes were found after careful investigation.

Accessory clinical findings

Tuberculin skin tests, 1-1000 and 1-100 O. T. and second strength P. P. D., were negative. The blood count on admission showed 4,200,000 red blood cells, 11.2 Gm. of hemoglobin, 8,700 white blood cells, 65 polymorphonuclears, and 35 lymphocytes. No monocytes, eosinophils or basophils were found. The urine showed a trace of albumin, a few red blood cells, and some white blood cells. The sputum was negative for acid fast bacilli, and eight subsequent examinations of sputum on smear and culture, as well as bronchial washings, were all negative for acid fast bacilli. The sputum culture for pyogens showed staphylococci and predominantly Friedlander's bacilli. Sensitivity studies showed only a moderate inhibition by chloromycetin.

Course in hospital

On admission the patient was started on a course of penicillin, 300,000 units, awaiting further laboratory findings. Radiologic ex-

amination of the chest suggested a bronchial occlusion. Bronchoscopic examination on the fifth hospital day showed only diffuse erythema and scattered greyish-white exudate, mostly in the left upper lobe bronchus. Bronchial washings and swabs from this part of the bronchial tree yielded negative cultures for acid fast bacilli, but were positive for Friedlander's bacillus. Papanicolaou stains from this region were reported as negative. None of the antibiotics, alone or in combination, had any effect upon the clinical picture, and a progressive hypochromic anemia developed. A bone marrow study done at this time was essentially normal.

After three weeks of antibiotic treatment x-ray examination showed regression of the homogeneous density in the left upper lobe. The temperature of the patient was always between 99 and 102 F. In the third to fourth week of hospitalization some eosinophils were found in the peripheral circulating blood. The eosinophil count reached a level of 18 to 21 per cent. It was thought that this rise might be due to the beginning of a sensitivity reaction to the various intensive antibiotic regimens to which the patient had been sub-

jected. All medication was stopped, and the eosinophil count dropped to 5 per cent within one week. Without any further medication being given, however, there was a slow but progressive rise to 12 or 14 per cent, which remained constant for the next week. At this time a palpable lymph node, which had not been present heretofore, appeared in the left supraclavicular fossa, and a histologic examination done on November 19, 1954, showed a typical picture of Hodgkin's paraganuloma. Marked eosinophilia was present in a second bone marrow aspiration at this time.

It was decided to start the patient on cortisone without her knowledge—25 mg. twice a day for three days, followed by 25 mg. daily. Her response was immediate, and her temperature dropped from the continuous high level of 99-102 F. to 98.6 F. during the next six days. Three days later a sputum culture was negative for Friendlander's bacillus, and the patient felt considerably better. At this time it was decided to start her on a course of nitrogen mustard. This was given in a dosage of 0.1 mg. per kilogram of body weight together with thorazine and vitamin B₁₂. No side effects whatsoever were noted. As a result, the tumor in the left upper lobe shrank to about one-half its previous size. The eosinophil count dropped from 15 per cent in the circulating blood to 2 and 3 per cent, and remained so during the rest of the time. The temperature remained constant at about 98 to 99 F. From this time on the patient improved visibly, and was soon able to walk around without difficulty.

After six weeks a new course of nitrogen mustard was given, and the patient is now entirely asymptomatic. There is still, however, a small mass in the upper left mediastinum. Careful examination for other lymphadenopathies has been entirely negative. She is still kept on a maintenance dose of 25 mg. of cortisone, and will soon be discharged from this hospital.

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It is becoming clear that pulmonary tuberculosis is more common in the middle-aged and elderly than was formerly believed; and the diagnosis should be considered in all cases with persistent chest symptoms.—M. B. Paul, M.D., *The Lancet* (London), August 11, 1951.

STILBAMIDINE TREATMENT OF TIC DOULOUREUX

BARNES WOODHALL, M.D.

and

GUY L. ODOM, M.D.

DURHAM

In 1942, Napier and Sen Gupta⁽¹⁾ described a late chronic neuropathy confined largely to the distribution of the fifth nerve which occurred as an unexpected sequel to the administration of 4:4 — diamidino-diphenyl-ethylene to patients with kala-azar. Recognizing the potential value of this and related drugs in the treatment of the pain of classical tic douloureux, Smith and Miller⁽²⁾, at the suggestion of Dr. Frank Ford, instituted the medical treatment of tic douloureux with stilbamidine in 1952. Their results in large part have been gratifying⁽³⁾.

Material and Method

Our experience with the stilbamidine therapy of tic douloureux began on April 27, 1953, and the treatment of our first roster of 41 patients was ended on August 29, 1954. The period of post-therapy observation in these patients has ranged, therefore, from two years to nine months.

Fifteen of the patients were males, 26 were females, with ages ranging from 32 to 86. Multiple sclerosis was present in one patient and arteriosclerotic vascular disease with hypertension was present in 13 patients. In 4 patients, the disease had manifested itself bilaterally. This is somewhat a biased roster, therefore, in terms of sex distribution.

Based upon some observations of the treatment of blastomycosis with stilbamidine at the Duke Hospital and the resultant neuropathy, 1.5 Gm. of the drug was chosen as being close to the minimum effective dosage for our purposes.

Stilbamidine isethionate*, 150 mg., was freshly dissolved in 150 cc. of 5 per cent glucose and distilled water, was protected from light by a dark paper covering, and was given intravenously over a period of one hour. No shock-like reactions were observed in this group. The course of therapy consisted of 10 daily injections for a total dosage of 1.5 Gm. of the drug. Two patients de-

From the Neurosurgical Division, the Duke Hospital and Medical School, Durham, North Carolina.

*Kindly supplied by the Merrell Company, Cincinnati, Ohio.

veloped thrombophlebitis at the point of injection. There were no late complications related to renal or hepatic injury.

Pre-therapy observations were directed toward the evaluation of a demonstrable organic cause for the tic pain and included the neurologic examination, x-ray studies of the internal acoustic meatus, audiometer and vestibular tests in selected patients, and the determination of spinal fluid protein. Electroencephalograms were done on all patients, and psychologic testing was performed in 8 patients. Complete blood, kidney, and liver function tests were done before and at various time periods after the completion of therapy. Although the post-therapy testing at this time has not been completed, no abnormal findings have been observed as yet.

Results

Thirty-six of the 41 patients, treated only by stilbamidine, have remained free of pain to the time of our last survey, April 19, 1955. Lasting relief of pain occurred from 40 to 150 days following termination of therapy. Because relief of pain was slow in appearing, 6 of the 36 patients with good results received a second series of treatments, for a total dosage of 3 Gm. Two of the remaining 5 patients with pain-free periods ranging from 4 to 10 months after treatment with 1.5 Gm. of the drug began to have recurrent pain. The first of these was the patient with multiple sclerosis, who has remained pain-free for nine months following an additional 1.5 Gm. The second patient, early in our roster, was treated by sensory root section. Both of these patients failed to develop a significant chemical neuropathy.

Because of continuing attacks of severe pain involving all three branches, 2 more patients were treated by sensory root section 60 and 72 days following completion of therapy. In both of these the characteristic chemical neuropathy subsequently developed in the opposite side of the face. The same sequence of events was noted in a third patient who was treated in another clinic with 2.1 Gm. of the drug and who was relieved of intractable pain 30 days after treatment by root section. Further reference will be made to these 3 patients. The fifth patient in our series was free of pain when he was killed by an automobile four months following treatment.

The notorious tendency for the pain of tic douloureux to waver in intensity makes a firm analysis of the early effect of this drug untenable. Some patients did have remissions in the latter half of their injection series. Most of them had acute episodes thereafter. As already pointed out, relief of pain was noted 40 to 150 days after treatment and was associated with or was followed shortly by the characteristic chemical neuropathy.

Neuropathic Complaints

The neuropathic effects of this drug are well known. Our patients described two groups of complaints: (1) a numb or leathery feeling of the face that was well accepted as the price for the relief of pain; (2) a disagreeable gamut of paresthesias noted in terms of itching, burning and tingling of the central area of the face, and by watering of the eyes. As far as such manifestations can be assessed, the second group of complaints was noted as annoying in 18 patients and considered a significant handicap of therapy by 7 patients. To date only 2 of these 7 patients have volunteered that their abnormal sensations were improving. Three patients complained of muscle twitching about the eyes.

In general, numbness and paresthesias appeared first on the side of the tic pain, although this was not invariably true. Although the roster was biased, complaints seemed more prominent among the females.

The neurologic changes and the paresthesias followed a definite pattern, but varied considerably and were unpredictable. In these patients, they were not affected in degree with dosages of 1.5 or 3 Gm. of the drug. Corneal sensitivity remained intact in all but one patient, and in this instance the decrease was slight. In all patients, previous trigger zones were abolished. In all 36 patients, some form of diminution to light touch sensation could be found, usually more evident over the side of the face originally affected by the tic pain. The change in appreciation of light touch varied from minimal involvement of the first and second branches of the fifth nerve on one side to bilateral anesthesia in 2 cases. Hypesthesia could also be noted over the upper cervical dermatomes, and scattered patients noted subjective numbness to the waist-line.

Diminution of the modality of superficial

pain appreciation was present in a lesser number of patients and was never complete. No change in temperature appreciation could be demonstrated.

In 3 patients receiving the drug, sensory root section was done for persisting intractable pain. In these, the ensuing chemical neuropathy marked by numbness, tingling, and formication was noted by the patient only on the normal or unaffected side of the face. These observations would perhaps suggest a distal source of drug effect.

Summary

Intravenous stilbamidine isethionate has controlled the pain of tic douloureux in 36 of 41 patients in this preliminary series of observations for a period ranging between two years and nine months. The relief of pain was associated with sensory changes over the trigeminal and upper cervical dermatomes that suggest a true chemical neuropathy. In a small percentage of cases, unpredictable formication and paresthesias occurring over the face tended to decrease the potential value of this therapeutic agent. The deferred action of the drug in patients with severe and unrelenting tic pain is a severe trial to both the patient and physician, and may necessitate provisional methods of control before the onset of the chemical neuropathy.

Although this drug in its intravenous form may not be the definitive medical therapy for tic douloureux, it represents a valuable adjunct to the care of this often complex pain syndrome. These observations should encourage a continuing study of the influence of stilbamidine in both its intravenous and oral forms upon the course of this disease.

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Public health programs should be so organized that the people who have the problems are given an opportunity to plan and contribute to the solution. Too often there is little participation by the individual, who passively receives the services. In a sense, health officials should aim to make every citizen a public health worker, at least in his own behalf.—Joseph W. Mountin, M.D., *Pub. Health Reports*, April, 1952.

OXYGEN AND RETROLENTAL FIBROPLASIA

FRANK C. WINTER, M.D.

CHAPEL HILL

Dr. V. Everett Kinsey, chairman of a joint committee on retrolental fibroplasia, has recently reported the preliminary findings of a cooperative study on oxygen as the cause of the condition⁽¹⁾. These findings support "recent clinical and experimental evidence that retrolental fibroplasia results from exposure of premature infants to an oxygen enriched atmosphere and apparently was brought to a successful conclusion the search for the cause of the disease which in 12 years has become the leading cause of blindness in children." The importance of this announcement warrants bringing it to the attention of the physicians of North Carolina, especially those concerned with the immediate care of the premature infant.

To summarize the situation briefly, retrolental fibroplasia appeared as a new disease in 1942. It occurs almost exclusively in premature infants weighing less than 3½ pounds at birth, and consists of an abnormal dilatation and proliferation of the retinal vessels. Approximately 50 per cent of infants weighing less than 3 pounds have shown this stage of the disease. Fortunately about two-thirds of the cases regress spontaneously to normal. About one third of the patients, however, have suffered a progression of the disease complicated by hemorrhages into the vitreous, with fibrous organization and eventual blindness.

Study of the many possible causative factors has been greatly complicated by the extreme variability in the incidence of retrolental fibroplasia throughout the country and in the same locality from year to year.

Preliminary Findings

In the past several years a number of investigators have reported clinical studies of the incidence following various regimens of oxygen therapy⁽²⁾. These studies suggested that oxygen did play a role in the pathogenesis of the disease, and prompted the formation of a cooperative group to widen the base of investigation sufficiently to provide solid statistical significance. Dr. Kinsey's report

From the Division of Ophthalmology, Department of Surgery, University of North Carolina School of Medicine, Chapel Hill, North Carolina.

summarizes the preliminary findings of this group as presented to the fifty-ninth annual session of the American Academy of Ophthalmology and Otolaryngology⁽³⁾.

Premature infants

Eighteen hospital nurseries throughout the country cooperated in the initial study of 391 premature infants weighing less than 3 pounds, 5 ounces at birth. Forty-eight hours after birth these infants were assigned to two groups in a random manner. One group received concentrations of oxygen in excess of 50 per cent for a period of four weeks, a practice which was then current for lighter premature infants in most of the hospital nurseries concerned. The second group received oxygen in concentrations of less than 50 per cent, and only on the basis of frank clinical need. All other factors concerned with the care of the infants were kept similar. Of the 391 infants involved, 68 were subjected to the routine use of oxygen and the remainder were placed in the curtailed oxygen group. Of those infants who received oxygen routinely, 25 per cent showed permanent ocular change as compared to 6 per cent in the group in which the use of oxygen was curtailed. The mortality after the first 48 hours of life in the group receiving routine oxygen was 22 per cent as compared with 20 per cent in the curtailed oxygen group. Further analysis of the data showed that the highest incidence was associated with the use of oxygen in the first few days of life, and emphasizes the importance of restricting the use of oxygen, especially during the first week.

Animal experiments

Recent experiments⁽⁴⁾ in newborn rats and kittens have shown that profound changes in the retinal blood vessels can be induced by exposing the animals to increased oxygen tension, and that the incidence and severity of the ocular changes are related to the concentration of oxygen in the environment. In these animals oxygen induces vascular changes only so long as the retina is incompletely vascularized. Once the animal has attained an age at which normal vascularization of the retina is completed, oxygen has no further effect. This is similar to the situation in human beings, in whom the normal development of the retinal vessels is not com-

pleted until the eighth month of gestation. The inference is clear that the more premature the infant, the less likely retinal vascularization is to be complete and the more susceptible he may be to the development of retrolental fibroplasia upon exposure to increased oxygen concentration.

It is to be noted that the curtailed use of oxygen as reported in the cooperative study did not completely eradicate the disease. It is generally felt, however, that the potential for the development of retrolental fibroplasia in the absence of increased oxygen concentration is relatively slight. It is to be hoped that more detailed study of the intimate mechanism relating oxygen to the new vessels of the retina will show that it is the actual oxygen tension of the blood rather than the oxygen concentration of the environment which is important, and that the use of oxygen in frank pulmonary distress will not prove harmful.

Recommendations

On the basis of information available to date, the following recommendations for the use of oxygen in premature infants seem warranted.

1. The use of oxygen should be limited to those infants showing actual pulmonary distress.
2. Wherever possible oxygen should not be used at all in the first days of life.
3. When it is necessary to give oxygen it should be used only in the minimum amount and for the minimum time necessary to reverse the signs of clinical need.

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A fee schedule that favors one segment of medicine, slighting another, will contribute to discontent, with resulting lack of the professional support essential to success.—Hodges, F. T., Billings, Montana.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

JUNE, 1955

THE A.M.A.'s ONE HUNDRED AND FOURTH ANNUAL MEETING

The annual meeting of the American Medical Association has grown so large that only a few cities in the United States can offer the necessary combination of adequate hotel facilities and a suitable auditorium. Of the few places that can thus qualify, Atlantic City is perhaps the first choice of most A.M.A. members and is selected oftenest for the annual meeting. At the one hundred and fourth meeting held June 6-10, even Atlantic City's large number of hotels were filled to overflowing and its vast auditorium was almost bursting at the seams after housing nearly 400 scientific and almost as many technical exhibits—in addition to furnishing meeting places for a number of the sections. The meeting was one of the largest ever

held, with approximately 15,000 physicians and more than that number of guests registered.

The week-end before the A.M.A. convention is always filled with activity, as many specialty groups hold their meetings at this time. On Sunday afternoon the eleventh annual meeting of the Conference of Presidents and Other Officers of State Medical Associations, held in the Traymore Hotel, was featured by four noteworthy addresses: (1) "A Reappraisal of Medico-Economic Problems," by Dr. Charles L. Farrell, president-elect of the Rhode Island Medical Society; (2) "My Experiences Practicing Under England's Social Medical Plan," by Dr. James R. Fox of Minneapolis; (3) "The Backdoor to Socialized Medicine," by Senator John W. Bricker of Ohio; and (4) "I Led Three Lives," by Herbert Philbrick of the F.B.I., giving Mr. Philbrick's experiences while posing as a member of the Communist party.

On Monday the House of Delegates held its first meeting in the Traymore Hotel, at the same time that general scientific meetings were being held in Convention Hall. By Tuesday the section meetings were under way. On Tuesday night the opening meeting was held. The high lights of this meeting, broadcast in a coast-to-coast hook-up by the American Broadcasting Company, included the farewell address of the retiring president, Walter B. Martin; Dr. Elmer Hess's inaugural address after taking the oath of office from Dr. Dwight Murray, chairman of the Board of Trustees; and an address by Dr. Norman Vincent Peale, "Medicine and Faith."

Wednesday the House of Delegates resumed its deliberations. The most controversial subjects were the reports of the Committee on Medical Practices and of the Committee on the Recognition of Osteopathy. In both instances the reports of the reference committees were overruled by the House of Delegates. A motion to send to each delegate the full 72-page report of the Committee on Medical Practices for study and consideration at the mid-winter session was adopted by a large majority.

The Committee on Osteopathy brought in a majority report in favor of cooperating with the osteopathic profession by allowing M.D.'s to teach in osteopathic schools. A minority report was also presented, recom-

mending that the report of the committee be received and filed and that the committee be thanked for its diligent work and be discontinued; (2) that if the American Osteopathic Association abandoned the osteopathic concept and approached the trustees of the A.M.A. requesting further discussion of the relations of osteopathy and medicine, another special committee might be appointed. After a prolonged debate the minority report was adopted by a vote of 101 to 82.

The action of the House of Delegates most pleasing to North Carolina doctors was the election of Dr. Millard D. Hill as vice president. This, however, rates a separate editorial. The choice of Dr. Dwight Murray of Napa, California, for president-elect, was expected and welcomed. Dr. Murray has served long and faithfully as a member of the Board of Trustees, and during the past four years has been its chairman.

* * *

A.M.A. NEWS NOTES

The weather was ideal during the first few days, but a cold rain from the northeast marred Wednesday and Thursday. These days reminded one of Editor Earl Godbey's comment many years ago in the *Greensboro Daily News*: this his idea of Hell was not a place where there was a nice warm fire burning all the time, but that a hell indeed would be a place where a cold east wind blew constantly.

* * *

Senator Bricker, in his address to the State Officers' Conference on "The Back Door to Socialized Medicine," made a powerful plea for his amendment to limit the treaty-making power of the President. The great part played in our nation's affairs by the International Labour Organization was given as an example of the abuse of the treaty-making power and the need for a check upon such inroads upon our constitutional rights. Senator Bricker stated that his amendment had two objectives: (1) to invalidate any existing treaty which conflicts with the Constitution of the United States and (2) to prevent the enactment of any internal law which would conflict with the Constitution. He stated that socialized medicine by treaty is a real danger. In other countries, he said, treaties cannot conflict with internal law.

Dr. Charles Farrell, president-elect of the Rhode Island Medical Society and also of the Conference of Presidents and Other Officers of State Medical Associations, proposed that county meetings should devote less time to scientific discussions and more to socio-economic problems in medicine. He said that most county society members knew too little of the aims and problems of medicine, and of the American Medical Association. He suggested 15 subjects to be studied by committees from the state societies. It was gratifying to note that North Carolina had already anticipated nearly every one of the committees—some of them by many years.

* * *

Dr. J. R. Fox of Minneapolis gave the high lights of his two years of experience in practicing under the national health scheme in England. He began by saying that socialized medicine was by no means a dead issue—and never will be. We could get a sad lesson from Great Britain, although the national health scheme is not altogether bad. The worst feature is its effect on the general practitioner. He is not allowed to practice in the hospitals, and there is a wide rift between the specialists and general practitioners. He reminded us that America was established as a democracy, while European countries began as feudal systems. He concluded by saying, "Socialized medicine is the foot in the door for the rest of socialization."

* * *

Although Herbert Philbrick's address was the last on the Conference program, his audience listened intently as he gave his experience as a member of the Communist party and an F.B.I. agent. He described the brain-washing process as based on Pavlov's technique for establishing conditioned reflexes in dogs. The Communist term "cybnetics" was defined as the control of all information. The Communists, he stated, have two distinct communicating lines—one for their own subjects, the other for the rest of the world. Philbrick concluded by saying that we have lost ground in the cold war of ideologies by being too complacent.

* * *

At least ten resolutions were introduced protesting against the addition to the last copy of "The Principles of Medical Ethics" (chapter 1, section 8), declaring it unethical

for a physician to participate in owning a drugstore unless adequate drugstore facilities were otherwise unavailable, and also applying the same principle to physicians dispensing drugs and appliances. The recommendation of the Reference Committee on Miscellaneous Business, which was adopted unanimously, change the section to read: "It is not unethical for a physician to prescribe or supply drugs, remedies or appliances as long as there is no exploitation of the patient."

* * *

Dr. Elmer Hess created a mild sensation when, in his address to the House of Delegates, he interpolated the suggestion that A.M.A. headquarters should be moved from Chicago to Washington. Apparently, however, this suggestion is not being taken seriously.

* * *

Tuesday night was followed by Dr. Norman Vincent Peale's "Medicine and Faith." While Dr. Peale was at his best, a good many of the audience thought that Dr. Hess made the more favorable impression. Certainly both men held the close attention of their hearers. The address of Dr. Hess is the first article in the *Journal of the American Medical Association* for July 11, and is well worth reading, even by those who heard him. It should give one confidence in the A.M.A.'s leadership during the coming year.

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TIMES CHANGE—OR DO THEY?

One often hears the expression, "My, how times change," but after glancing through a recent issue of the Illinois State Medical Society's News-Letter I wonder if times change as we sometimes are led to believe.

Someway, somehow, Dr. Harold Camp, secretary of the Illinois society, came up with this quote from Dr. Robert Boal of Peoria, which was published in 1882.

"The amenities of professional intercourse, and the obligations of medical men toward each other and the public, were perhaps better observed in 1850 than now. Then the doctor, next to the minister, was the trusted friend and counselor of every family to whom he ministered. He shared their

joys, soothed their sorrows, and every passing year added to and cemented the attachments and affection between them. Now the doctor is regarded more in the light of a tradesman or mechanic, and is employed from the same consideration that a grocer, tailor or shoemaker is. The strong ties of gratitude and affection have almost ceased to exist. Relationship is now placed upon a mere commercial basis, and for this the profession is more to blame than the public."

Reprinted from The Medical Bulletin, May, 1955.

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DR. MILLARD HILL ELECTED VICE PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION

At the one hundred and fourth annual meeting of the American Medical Association the House of Delegates elected Dr. Millard Hill vice president. Since the Association has only one vice president, the office means much more than if second and third vice presidents were also elected. Furthermore, since in the case of the death or serious illness of the president the vice president replaces him, the office is relatively more significant than the corresponding one in our State Society, in which if the president should be disabled, the president-elect succeeds to the presidency and serves an additional year.

Dr. Hill has richly deserved this honor by serving our State Society so efficiently as secretary-treasurer, and the American Medical Association as a delegate. North Carolina citizens, especially her doctors, can take just pride in the signal honor accorded Dr. Hill.

* * *

NEW STATE SOCIETY MEMBERSHIPS REDUCED JULY 1

Now applicants for membership in the State Medical Society—that is, physicians taking up the practice of medicine in North Carolina for the first time in the late spring or early summer—will be interested to learn that Society dues are reduced by one-half on or after July 1. It should be noted that this reduction applies to new memberships only, not to renewals.

Committees and Organizations

Report of Committee Appointed by the President to Study and Make Recommendations to the House of Delegates Concerning the Question of the Admission of Qualified Negro Physicians to Membership in the Medical Society of the State of North Carolina.

In submitting the report of its study and recommendations, the Committee desires to make available to the House of Delegates of the Medical Society of the State of North Carolina, all information pertinent to the question involved for their consideration, in order that they may have the benefit of this information in either approving or opposing the recommendations which your Committee is prepared to make in keeping with its study and in the light of the responsibility with which it is charged.

The Committee was appointed by President Owens in late November of 1954. In setting up the Committee, our President followed the mandate of the House of Delegates of this Society, who, under the presidency of Dr. Joseph A. Elliott, directed in May, 1954, that a Committee be appointed by the incoming President to study and make recommendations regarding the question of admitting Negro physicians to membership in the Medical Society of the State of North Carolina.

As soon as the Committee was appointed its members immediately began to inform themselves, assemble available pertinent data, and attempt to clarify their individual thinking on the question involved. A meeting of the Committee was called in early January, 1955. President Owens attended, and along with the entire membership of the Committee, explored for a period of over four hours the various ramifications of the question. At this meeting the following facts were ascertained:

1. A number of the Medical Societies of southern states had already acted to admit Negro physicians to their membership. The Medical Society of Virginia had taken this action in October, 1954.

2. The action of some of the Medical Societies of southern states had been limited. For example, the State of Mississippi had in effect admitted Negro physicians to scientific membership only, without the right and privilege of paying dues and voting on questions coming before the Society.

3. The Delegates from the Medical Society

of the State of North Carolina had been instructed to attempt to get a resolution through the House of Delegates of the American Medical Association admitting members of the Old North State Medical Society to membership in the A.M.A. This Society, as is well known, is composed entirely of North Carolina Negro physicians, and it was felt that if they could be admitted through this society into the A.M.A. it would be desirable, and they would be afforded the privileges of A.M.A. membership. The resolution offered by our Delegates had failed to obtain favorable action by the House of Delegates of the A.M.A. This fact was substantiated for your Committee by the Secretary of the Medical Society of the State of North Carolina, Dr. M. D. Hill, who stated that a number of attempts along this line had resulted in failure.

4. The attorney for the Medical Society of the State of North Carolina had rendered the opinion that the admission of Negro physicians to membership in this Society would be in violation of the constitution and by-laws as presently existing.

5. The Mecklenburg County Medical Society had requested and received a legal opinion contrary to the opinion of the attorney for the Medical Society of the State, and as a result of this opinion, had acted to admit a Negro physician to membership. This raises the question as to whether or not the Mecklenburg County Medical Society by its action has violated the constitution and by-laws of its parent organization.

6. The Guilford County Medical Society has expressed the desire of their membership to admit certain qualified Negro physicians to the Guilford County Society, but when learning that they would be violating the constitution and by-laws of the parent organization, decided not to press the matter until the legal points governing admissions of Negro physicians could be cleared up.

In addition to substantiating the foregoing facts, your Committee in its first meeting discussed many angles of the problem, including the probable disruption of the long existing social mores obtaining in our state. It was finally decided to invite representatives of the Old North State Medical Society (the Negro organization) to meet with your Committee for a discussion of the matter and ascertain their views concerning it. Your

President and Committee deemed it advisable to invite also the chairman and members of the Committee to review the constitution and by-laws and the secretary of the Medical Society of the State of North Carolina to attend this meeting.

This second meeting was held in Kinston, North Carolina, on January 23, 1955. Those attending were: President Owens, Secretary Hill, of the Medical Society of the State of North Carolina, and President Simmons and Doctors Murray Davis and E. V. Davis, representing the Old North State Medical Society. In addition to the officers of the two organizations there were present: Dr. Roscoe McMillan, Dr. Donnell Cobb, Dr. Wayne Benton, representing the Committee on the Constitution and By-laws, and Dr. Street Brewer, Dr. Ben Royal, and Dr. Paul Whitaker, who constitute the Committee to Study and Make Recommendations on the question of admitting Negro physicians to membership in the Medical Society of the State of North Carolina.

President Owens opened the meeting with a general survey of the situation, and turned the meeting over to Chairman Brewer, who asked the Negroes present for a statement of their views and aspirations. Dr. Simmons, President of the Old North State Medical Society, spoke first, and emphasized the following points:

1. That the major aspiration of the Negro physicians of North Carolina in seeking membership in the Medical Society of the State of North Carolina was scientific advancement as medical men. He emphasized that failure to belong to the county, state, and national medical associations handicapped the Negro physician not only in scientific development by not being able to attend the scientific sessions, but also handicapped the Negro physician in obtaining hospital staff appointments, certification by specialty boards and other similar appointments.

2. He touched in general upon certain injustices that the Negro and the Negro physician had been called upon to endure over a long period of time, and stated that he felt that we would want our organization to treat fellow physicians as we would want to be treated.

3. He stated that he did not believe that the white physicians of North Carolina would

want to handicap a fellow practitioner in his aspiration by reason of his color.

4. He stated that he realized and appreciated the social implications of the question involved, the difficulty of their solution, and that he would not want and he did not believe that the Negro physicians of North Carolina wanted to immediately break down the accepted mores obtaining in North Carolina at the present time.

5. He stated that he believed in time the social implications and difficulties of the problem would be solved, and pleaded for a sane and objective approach to the problem, rather than an approach based on fear of future consequences should favorable action be taken by this Society.

Dr. Simmons was followed by Dr. E. B. Davis, who stated in effect that Dr. Simmons had expressed his own views, and that he was in agreement with the remarks that Dr. Simmons had made.

Dr. Murray Davis then elaborated on the remarks of Dr. Simmons, and expressed his agreement with them. He emphasized also the handicaps of the Negro physicians, both professionally and socially in our present culture, and in his discussion and through exchange of questions and remarks, made the following points:

1. He stated that he felt that he had the inherent right to attend any type of meeting that he wanted to attend, but that in the light of existing conditions he exercised discretion in what gatherings he attended.

2. He stated that he thought it would be poor judgment, and in fact "almost insane" for himself, or any other Negro physician, to apply under existing conditions for accommodations at the Carolina Hotel in Pinehurst, where the annual scientific and social meetings of the Medical Society of the State of North Carolina are held.

3. He illustrated by quoting a number of happenings of how the Negro physician had exercised discretion and restraint so as not to disturb the present existing social customs.

4. He stated that he believed the majority of Negro physicians wanted to maintain the organization of the Old North State Medical Society, because of the associations and friendships already established and enjoyed in that organization.

Through an exchange of questions and an-

swers regarding the advisability of the Negroes developing a strictly Negro culture within the guaranteed prerogatives of our state and nation, including the development of pride of race, rather than encouraging joining the white culture, Dr. Davis and Dr. Simmons frankly but respectfully pointed out that there were comparatively few Negroes today with pure African blood and that to the extent that amalgamation of the races existed, it was due largely to the white race.

5. He stated in effect, as did also Dr. Simmons, that they hoped the white physicians of North Carolina would aid them to obtain scientific recognition and the opportunity for improvement and advancement, and that this was their primary aspiration. They pledged that if Negro physicians were given the privilege of being admitted to membership in the Medical Society of the State of North Carolina, that they and their organization would aid in properly screening Negro physicians who applied for membership on the county level.

6. The spokesmen for the Negro physicians present at the meeting, in effect, pledged themselves that they would use their influence among members of their race to prevent any attempt to acutely disturb the present social customs prevailing in our state, and to aid in working toward a gradual and evolutionary solution of this admittedly intricate and potentially explosive problem.

After the Negro physicians had spoken and answered questions, there was an equally frank expression of opinion by the members of the two committees representing your Society. This discussion took place largely in the presence of the Negro physicians, and in executive session after they had left the meeting.

The essential points and expressions, many of them originally divergent, were made as follows:

1. One member of the Committee stated very frankly that he did not think the time was right for social equality between members of the Negro and white races; that he did not care to mingle with Negroes socially; that he felt that admitting Negro physicians to the Medical Society of the State of North Carolina would break down the existing social customs, and that while he might be considered prejudiced, he did not think ad-

mitting Negro physicians to membership would be wise.

2. It was pointed out that if Negro physicians were admitted to membership, and any of them attempted to crash the social functions of the Annual Meetings, they would be deprived of a meeting place, to say nothing of the disruption of the annual social functions that had come to mean so much to the present members of the Medical Society of the State of North Carolina and their wives and guests.

3. It was pointed out that the members of the Medical Society of the State of North Carolina enjoyed the friendships and associations of their annual sessions in the same way as did the members of the Old North State Medical Association, and would prefer not to have these associations disrupted by all of the implications of the racial question that might result from admitting Negro physicians to membership. At the same time, no one questioned the right or desired to impede the Negro physician from his aspiration for equal opportunity for scientific advancement or in any manner to stand in his way for individual and collective advancement within his rights as a citizen of the United States, and in keeping with his individual capabilities to achieve the privileges and attainments that he aspired to.

4. The question of equality, justice, freedom, security, social inequities, and human values in general were discussed. The point was made that each individual in the final analysis, had to determine and achieve these values for himself, and that even if they were given to an individual or to a collective society, that they could not be maintained or broadened save through constant struggle, vigilance, growth and increasing maturity by the individual and the society of which the individual is a part.

5. The commendable record of the State of North Carolina in its gradual development of equal opportunity, educational and otherwise, for the Negro was pointed up, and the explosive potentialities of the implementations of the recent Supreme Court decision in attempting to hasten this healthy, certain, and evolutionary development were questioned.

6. The primitive reactions as witnessed by their acts of members of a race only a few generations removed from the jungle were

also touched upon, and the questions raised as to whether or not many of the Negro race were individually ready and prepared for full responsibility of citizenship in a pressure ridden culture such as that prevailing in America today. It was readily admitted that there were members of the white race who had enjoyed longer and more helpful exposure to culture than Negroes, and who by their actions had shown that they were not mature enough to exercise responsibly certain privileges.

7. It was pointed out to the Negro physicians that members of the Committee from the Medical Society of the State of North Carolina had a feeling for and understanding of the emotional trauma to which a Negro physician was subjected in our present culture, particularly trauma to their personality as human beings as a result of some of the conditions to which they were submitted.

8. One member of the Committee stated that a Negro, who despite the handicaps under which he had labored, had demonstrated the ability and tenacity of purpose to obtain his training and license to practice medicine, had as far as he was concerned fully earned his equality, and should be allowed to enjoy the privileges associated with what he had earned.

9. The point was made that both Negro and white physicians of the South had a far greater understanding of the delicacy, difficulty, and potential danger of the practical application of racial relationships than did such organizations as the National Association for the Advancement of Colored People.

10. It was also pointed out that in the opinion of the Committee, the great majority of the members of the medical profession were believers in the Christian principle of the brotherhood of man under the fatherhood of God, and that to discriminate through their organizations against an individual for reason of his race, is both unfair, unchristian, and unwise.

11. In the opinion of the Committee it was unwise and unfair to deny a Negro physician, by reason of his color, the place in society which he has achieved through his industry, character, and tenacity of purpose. To so deny him, is in our opinion, not only a

violation of Christian ethics, but also a violation of the tenets of true democracy in which we profess to believe.

12. Your Committee, believing that physicians are an enlightened group of men, and so regarded, and generally interested in the general welfare of their community, state, and nation, have certain responsibilities to exercise vision and leadership in the solution of all problems, including the one presently before you.

13. Your Committee believes that time, religion, ethics, mutual consideration of the finer sensibilities of each other as human beings, and increasing individual and collective growth and maturity by both races, will gradually result in a solution of the racial question, including the relationship between white and Negro physicians. It seems to us that a beginning might well be made by the physicians of the two races in an attitude of mutual understanding and tolerance.

14. We believe that the meeting of your Committee with representatives of the Negro physicians has resulted in a mutuality of understanding and feeling not heretofore achieved. As a result of our studies of the problem, we believe it is the earnest desire of the Negro leaders to preserve for the present the social customs now prevailing and to approach any change in same in a careful and evolutionary manner.

Favorable action by this society would be a tremendous challenge to the Negro medical leaders to strive for an orderly transition.

In the light of the foregoing facts and considerations, your Committee therefore recommends that Section 5, Chapter 15 of the By-laws be so amended as to add thereto the following:

"Be it further enacted that qualified Negro physicians who are practicing non-sectarian medicine may be admitted (as scientific fellows) to all of the scientific and business assemblies of the Society with the privileges of this particular session of the Society."

This, it seems to your Committee, would meet the desires and ambitions for scientific opportunity as medical men as expressed to your Committee by the leaders of the Old North State Medical Society. It would in ef-

fect allow them to become members of the A.M.A. with the privileges and opportunities that such membership affords.

Respectfully submitted,

J. Street Brewer, M.D.,
Chairman

Ben F. Royal, M.D.

Paul F. Whitaker, M.D.

Pinehurst, North Carolina

May 2, 1955.

CORRESPONDENCE

TO THE EDITOR:

You physicians in North Carolina certainly are to be congratulated on your fine organization. I don't know when I ever enjoyed a meeting more than the annual session of the Medical Society of the State of North Carolina at Pinehurst . . . I particularly enjoyed sitting in on a part of your editorial board meeting.

THOMAS A. HENDRICKS
Secretary
Council on Medical Service

BULLETIN BOARD

COMING MEETINGS

Duke Medical Postgraduate Medical Courses—
Duke Hospital, Durham, June 20-23; aboard the M. S. Stockholm, November 23-December 5.

Southern Pediatric Seminar, Saluda, North Carolina, July 11-16; 18-23.

New Hanover County Medical Symposium—
Wrightsville Beach, August 19.

Tenth District Medical Society Fall Symposium—
Memorial Hospital Medical Library, Asheville, October 12.

North Carolina EENT Society and the South Carolina Society of Ophthalmology and Otolaryngology, combined meeting—Columbia Hotel, Columbia, S. C. September 12-14.

American Medical Association Clinical Session—
Boston, November 29-December 2.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

It has just been announced by Dr. W. Reece Berryhill, dean of the School of Medicine, that the University of North Carolina has been awarded \$57,998 in U. S. Public Health Research Grants. The following doctors are the recipients of the grants listed with their projects:

Dr. James C. Andrews, professor of biochemistry and nutrition, \$5,940, Metabolic Abnormalities Causing Urinary Calculi; Dr. Paul L. Bunce, assistant professor of surgery, \$2,997, P-32 Uptake of Bladder Tumors; Dr. Colin G. Thomas, assistant professor of surgery and Dr. Richard M. Peters, assistant professor of surgery, \$3,240, Use of Radium in Human Cancer; Dr. James A. Green,

assistant professor of anatomy, \$5,000, Histogenesis of Irradiation-Induced Ovarian Neoplasms.

Dr. Charles E. Jenner, associate professor of zoology, \$5,693, A Study of Animal Photoperiodism; Dr. John H. Schwab, instructor in bacteriology, \$4,914, Cellular Components of Group A Streptococci; Dr. John B. Graham, associate professor of pathology, \$9,757, Role of Inhibitors in Hemophilia; Dr. Rupert B. Vance, professor of sociology, \$7,497, Study of Mortality of Males and Females; Dr. Emmett Baughman, associate professor of psychology, \$12,960, Objectification of Rorschach Inquiry and Scoring.

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Dr. Robert A. Ross, professor and head, Department of Obstetrics and Gynecology, University of North Carolina School of Medicine, has been named dean of obstetrics for the postgraduate seminar in obstetrics and gynecology to be held at Saluda July 25-30.

This course in obstetrics and gynecology will be presented as the third week of instruction in connection with the annual session of the Southern Pediatric Seminar.

Other U.N.C. staff members named to the seminar faculty are: Dr. David Hawkins, assistant professor of psychiatry; and Dr. Charles E. Flowers, associate professor of obstetrics and gynecology.

Dr. Ross recently served as examiner on the American Board of Obstetrics and Gynecology in Chicago, Illinois.

* * *

Harvey Allsbrook Page of Rocky Mount, has been named winner of the William deB. MacNider Award at the University of North Carolina School of Medicine. The award was sponsored first by the second year class of 1950 and was established as a public commendation of a sophomore medical student who is to be elected by classmates as possessing the intangible traits of good character which were typified by Dr. "Billy" MacNider during his 51 years as teacher and professor in the university. The presentation is in the form of a plaque on which the student's name is to be inscribed each year.

The results of election of officers of the Whitehead Society and the chairman of the Honor Council of the School of Medicine have also been announced. The chairman of the Honor Council for 1955-56 is John Vassey of Asheville. The Whitehead Society officers for 1955-56 are:

President: William W. McLendon, Greensboro.

Vice President: William Purcell, Laurinburg.

Secretary: Nat Sparrow, Chapel Hill.

Treasurer: Jack Hobson, Charlotte.

The Whitehead Society is composed of all students in the Medical School.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Dr. Knut Schmidt-Nielsen, professor of zoology at Duke, was a speaker at the International Arid Lands Symposium held in Albuquerque recently. He emphasized that too large animal herds in desert and semi-desert areas are not economically practical for production of meat, and urged world economists to make better use of desert grazing areas.

"It is obvious that when animals are fed just enough for maintenance, no production can take place. By cutting down on the number of animals, the same amount of feed will serve for production as well as maintenance," he pointed out.

The Duke University Council on Gerontology presented as its first guest lecturer Dr. Wilma T. Donahue, chairman, Division of Gerontology, University of Michigan, who spoke on "Planning For Later Maturity," on May 19, and on "Learning Potentialities and Adult Education in the Later Years," May 20.

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NORTH CAROLINA SURGICAL ASSOCIATION

The North Carolina Surgical Association held its spring meeting at the Homestead, Hot Springs, Virginia, On May 27 and 28.

The program for the first day consisted of a paper entitled "Office Gynecology," by Dr. Joseph Patterson of New Bern, and a paper by Dr. Horace Baker, Lumberton, entitled "Vaginal Hysterectomy." This was followed by a gynecological round table discussion, with Dr. Alfred Hamilton of Raleigh, as moderator and the following panel speakers: Dr. R. G. Postlethwait of Kinston; Dr. Kenneth Tanner of Rutherfordton; Dr. Dennis Fox of Albemarle; and Dr. Hubert Poteat of Smithfield.

The second day's program consisted of the following papers: "Arterial Transplant" by Dr. Felda Hightower of Winston-Salem; "Hyperparathyroidism," by Dr. Addison Brenizer of Charlotte; "Mediastinal Tumors," by Dr. Will Sealy of Durham; and "Little Things Learned in Practice" by Dr. George Wood of High Point; Dr. Donald Koonce of Wilmington; and Dr. James Marshall of Winston-Salem.

NORTH CAROLINA TUBERCULOSIS ASSOCIATION

Dr. Lynwood E. Williams, of Kinston was elected president of the North Carolina Tuberculosis Association at the Board of Directors meeting held in Durham on April 13. Other officers elected were: E. N. Pope, Raleigh, president-elect; Dr. C. D. Eatman, Rocky Mount, vice president; A. L. Bechtold, Charlotte, secretary; and T. W. Steed, Raleigh, treasurer.

Elected to serve with the officers on the Executive Committee were: Dr. R. B. C. Franklin, Mount Airy; Mrs. Roy Parker, Ahoskie; George J. Johnson, High Point; Dr. E. E. Menefee, Durham; and Tom Woodard, Wilson.

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Dr. C. D. Thomas, associate superintendent and medical director, Western North Carolina Sanatorium, was elected president of the North Carolina Trudeau Society at its eighth annual meeting held in Durham.

The other officers elected for 1955-1956 are Dr. C. Hege Kapp, medical director of the Forsyth County Sanatorium, vice president, and Dr. Robert F. Young, Halifax County Health Officer, secretary-treasurer.

The North Carolina Trudeau Society is the medical section of the NCTA.

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The theme for the sixth institute on problems in tuberculosis control to be held in Chapel Hill July 31-August 3 will be "Tackling Community Roadblocks Encountered in Rehabilitating the Patient."

Approximately 70 people from the southern states including doctors, nurses, social workers, health educators, DVR representatives, occupational therapists, sanatorium teachers, rehabilitation workers, and executive secretaries of state and local tuberculosis associations, and their professional staffs are expected to attend.

Sponsors of the institute in addition to the NCTA are the Schools of Public Health, Social Work, and Medicine of the University of North Carolina, the State Board of Health, the Division of Vocational Rehabilitation, the Sanatoriums, and the State Board of Public Welfare.

* * *

The total 1954 Christmas Seal Sale in North Carolina was \$475,586.09, according to a report given by Carl O. Jeffress, 1954 State Christmas Seal Sale Chairman, at the concluding luncheon of the 49th Annual Meeting of the NCTA. This is the highest the Christmas Seal Sale has ever been in North Carolina and is an increase of \$17,255.61 over the previously high year of 1952. It represents an increase of \$28,554.59 or 6 per cent over the 1953 Christmas Seal Sale.

NORTH CAROLINA STATE BOARD OF HEALTH

The North Carolina General Assembly, 1955 session, amended Section 130-102 of the General Statutes, whereby the fee for certified copies of birth and death certificates was increased from fifty cents (50¢) to one dollar (\$1.00). This increased fee became effective May 12, 1955.

The necessity for increasing this fee was brought about by curtailed health funds and to enable the State Board of Health to continue to render proper service to the general public.

NORTH CAROLINA SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

The second annual North Carolina Easter Seal Camp for Crippled Children will be held at Camp New Hope, Route 2, Chapel Hill, North Carolina, August 14, through August 28.

Total cost for the two-week period will be \$40 per child. Children from 8 to 16 years of age will be accepted. (Child must have completed the second grade.)

Camperships may be available through county Easter Seal Societies, civic clubs, individuals. The state office is underwriting half the cost.

The camp program will emphasize recreation. Physical therapy will be provided to those children requiring it under a doctor's prescription. Craft work, swimming, games, and hiking will be other activities provided.

Application blanks and additional information may be secured from the North Carolina Society for Crippled Children and Adults, Inc., Box 839, Chapel Hill.

NEWS NOTES

Dr. George Darwin Wilson of Asheville, has been elected to membership in The American Medical Writers' Association. The only organization in America devoted to improvement of the written word of medicine, the Medical Writers' Association is affiliated with the American Association for the Advancement of Science.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

AMA Surveys County Medical Societies

To find out what county medical societies throughout the country are doing and to help them develop new public service programs, the AMA's Council on Medical Service currently is distributing questionnaires to officers of the 1,911 county and district medical societies in the U.S. The most complete of its type ever undertaken, this survey covers all major areas of society interest—including

meetings, committees, programs and activities, insurance programs, dues, office facilities, and personnel. Since this is the only way that the Association can keep abreast of society activities, the Council hopes that all questionnaires will be returned as soon as possible. The information gleaned from these reports will be invaluable aids to societies seeking assistance in expanding their activities and will help the Council's staff increase its ability to be of service to society officers and members.

* * *

AMA Aids Health Education Workshops

Constant effort is being made by the American Medical Association to emphasize the role of the educator, physician, and family in providing sound health education for our nation's school children. During this summer season, two staff members of the Bureau of Health Education—Fred V. Hein, Ph.D. and Donald A. Dukelow, M.D.—will attend nine school health workshops sponsored by universities, state education and health departments, and voluntary health agencies. These workshops are designed primarily for teachers, school administrators, school nurses, and interested physicians and dentists.

* * *

New Film On Rheumatic Fever

A new health education film—"Stop Rheumatic Fever"—has just been added to the AMA's Motion Picture Library. The film was developed to impress upon parents, teachers and the public the fact that rheumatic fever can be prevented by early diagnosis and treatment of streptococcal infections. This 12-minute black and white sound film, employing symbolic animation to emphasize the point, is suitable for parent groups, service clubs, public health nurses, and high school students.

* * *

Digest Of Rural Health Meeting

Copies of the digest of the National Conference on Rural Health may be secured after June 15 from the AMA's Council on Rural Health. This digest—following the Conference theme of "Looking Both Ways" at various rural health problems—contains reports of discussions held on such subjects as farm and home safety, family responsibility for health, utilizing our present health and medical care facilities to the fullest extent. State and county rural health chairmen will find this booklet of particular value in helping to develop new society projects in their areas.

* * *

For The Youngsters—Medical Mystery Shows!

A wholesome and instructive medical who-dunit transcription series will be available after June 15 from the AMA's Bureau of Health Education for airing over local radio stations. Entitled, "Dr. Tim, Detective," this series relates some of the novel experiences which the doctor and his teen-age pals—Sandy and Jill—have solving mysteries related to health.

Written and produced by the Rocky Mountain Radio Council under the supervision of the Bureau, this series is particularly suitable for those radio listening hours directed to the small fry. Medical societies sponsoring "Dr. Tim" transcriptions might wish to inform the local P.T.A. of the hour the programs will be aired.

Subjects included in the 13-program series: diabetes, rabies, hearing, dope peddling, hookworm, appendicitis, asthma and allergies, anesthesia, nursing care, blood and fractions, rheumatic heart disease, Rocky Mountain Spotted Fever, and patent medicines.

Latest Word On Multiple Screening Projects

Up-to-date information on multiple screening programs is incorporated in a new booklet to be available about June 15 from AMA's Council on Medical Service. Containing definitions, basic principles, and statements of both the advantages and disadvantages of such programs, the booklet also includes detailed descriptions of 33 multiple screening surveys carried on in 14 states and the District of Columbia. The surveys reported on range from small operations in a single company to state-wide programs.

AMERICAN MEDICAL EDUCATION FOUNDATION

Members of the medical profession and particularly committee workers of the American Medical Education Foundation were saddened upon learning that Dr. Louis D. McGuire, former AMEF state chairman in Nebraska, died April 20, following injuries sustained in an automobile accident on April 17. Dr. McGuire was the first recipient of an AMEF Award of Merit, which was presented to him at a meeting of AMEF state chairmen on January 25, 1953. Through his fund raising efforts, the Foundation received \$49,146 from 474 Nebraska physicians in 1952 and approximately \$30,000 in annual pledges which were paid to AMEF in 1953 and 1954.

AMERICAN MEDICAL WRITERS' ASSOCIATION

A Workshop in Medical Writing will be held on Saturday, October 1, during the twelfth annual meeting of the American Medical Writers' Association, St. Louis, Missouri. Instruction will be under members of the journalism faculties of the University of Illinois, University of Missouri and University of Oklahoma.

Addresses will include "From First Draft to Printed Article," Dr. Paul Fisher, School of Journalism, University of Missouri; "Specific Devices for Increasing the Readership of Medical Articles," Professor Stewart Harral, School of Journalism, University of Oklahoma; and "Writing Magazine Articles for the Lay Reader," Theodore Peterson, assistant professor, School of Journalism and Communications, University of Illinois.

AMERICAN COLLEGE OF RADIOLOGY

Cinefluorographic examination of the swallowing process, using fluoroscopic, x-ray motion pictures, now makes it possible to verify accurately what physicians heretofore have merely been able to infer and generalize.

This is the report from a University of Rochester radiologist, Dr. G. H. Ramsey.

The new information, recorded on 35 millimeter movie film at camera speeds of 30 and 60 frames per second, is expected eventually to provide a reliable x-ray motion test for normal swallowing.

Assisting Dr. Ramsey in the research at the University of Rochester Medical School were Drs. J. S. Watson and R. Gramiak, from the Department of Radiology, and Mr. S. A. Weinberg. Their conclusions have been presented in a recent issue of *Radiology*.

AMERICAN HEARING SOCIETY

Mrs. Tessie O. Shirley, of Brownwood, Texas, has been awarded the American Hearing Society's Kenfield Memorial Scholarship for 1955. The Society makes the award annually to a prospective teacher of lipreading.

CANCER CHEMOTHERAPY NATIONAL COMMITTEE

A national voluntary program of cooperative research and development to find and produce effective drugs for the treatment of cancer has been launched under sponsorship of the country's leading organizations and government agencies in this field of medical science, it was announced recently.

General guidance of the program will come from the Cancer Chemotherapy National Committee, established on May 14 as the top policy-making body, headed by Dr. Sidney Farber, scientific director of the Children's Cancer Research Foundation in Boston. This Committee will define the scope of the program, develop general policies, assist in obtaining financial support for the work, coordinate the activities of the sponsoring organizations, and observe the rate of progress of the entire effort.

The other members of the Committee are: Dr. Charles L. Dunham, Atomic Energy Commission; Mrs. Albert D. Lasker, National Advisory Cancer Council, and American Cancer Society; Dr. Theodore S. Moise, Veterans Administration; Dr. C. P. Rhoads, Memorial Center for Cancer and Allied Diseases, New York; Robert S. Roe, Food and Drug Administration; Dr. Antonio Rottino, Damon Runyon Memorial Fund; Mefford R. Runyon, American Cancer Society; Dr. Leon A. Sweet, Parke, Davis and Company, representing the pharmaceutical industry; and Dr. Kenneth M. Endicott, National Cancer Institute, Executive Secretary. The chairman, Dr. Farber, is also chairman of the Chemotherapy Committee of the National Advisory Cancer Council, U.S. Public Health Service.

The sponsoring organizations are: American Cancer Society, Atomic Energy Commission, Damon Runyon Memorial Fund for Cancer Research, the Food and Drug Administration and the National Cancer Institute of the U.S. Department of Health, Education, and Welfare; and the Veterans Administration. Representatives of these organizations met at the National Institute of Health in Bethesda, Maryland, to form the National Committee. They also designated an advisory group for liaison with the pharmaceutical and chemical industries, consisting of: Dr. M. L. Moore, Vick Chemical Company, Chairman; Dr. George Hitchings, Burroughs-Wellcome and Company; Dr. Randolph Major, Merck and Company; Dr. Robert Parker, American Cyanamid Company; Dr. D. D. Irish, Dow Chemical Company; Dr. William Feirer, E. R. Squibb and Sons; and Dr. L. A. Sweet, Parke, Davis and Company.

In addition, four technical advisory panels are being established and will meet in June to assess the progress in cancer chemotherapy research and make recommendations for the future. These panels will cover the fields of chemistry, pharmacology, screening of chemical compounds through experiments on animals, and clinical studies.

SIXTH INTERNATIONAL CONGRESS OF OTOLARYNGOLOGY

The Sixth International Congress of Otolaryngology will take place in Washington, D. C., from Sunday, May 5, through Friday, May 10, 1957, under the presidency of Arthur W. Proetz, M. D. The subscription for members is \$25.00 (U.S.A.) which will include all official meetings of the Congress except the banquet. Ladies and other relatives accompanying members may be registered as Associates at a fee of \$10.00.

The selected subjects for the Plenary (Combined) Sessions to be held Monday, Wednesday and Friday mornings will be:

1. Chronic Suppuration of the Etmoidal Bone
2. Collagen Disorders of the Respiratory Tract

3. Papilloma of the Larynx

Outstanding internationally recognized authorities will open the discussion of each of these subjects.

Two types of communications are invited: (1) contributions to the discussions of the selected subjects, limited to 5 minutes; (2) original papers, limited to 15 minutes. These should be in one of the four official languages: English, French, German, Spanish.

For further information please address the General Secretary, Paul H. Hollinger, M.D., 700 N. Michigan Ave., Chicago 11, Illinois.

POSTGRADUATE COURSE IN PEDIATRIC ALLERGY

New York Medical College, Flower and Fifth Avenue Hospitals, Division of Graduate Studies, Department of Graduate Pediatrics, announce a postgraduate course in pediatric allergy under the direction of Dr. Bret Ratner, professor of clinical pediatrics and associate professor of Immunology. The course will extend from November 2, 1955, to May 31, 1956, and will consist of 30 sessions. These will be held on Wednesdays, from 9 a.m. to 4 p.m. A fee of \$300 will be charged.

Applicants must be certified in pediatrics or have requirements for certification. Enrollment will be limited.

Apply: Office of the Dean, New York Medical College, Fifth Avenue at 106th Street, New York 29, New York.

HAMILTON COLLEGE PREMEDICAL SCHOLARSHIP

A scholarship for undergraduates preparing for medical careers has been established at Hamilton College, in Clinton, New York, with a gift of \$18,000 by the Lillia Babbitt Hyde Foundation of New York City.

College President Robert W. McEwen, in announcing the gift, said that the scholarship is being offered in recognition of the special needs of undergraduate medical students for financial assistance.

The foundation has long been interested in medical research; the college has an excellent record of preparing men for careers in medicine and other fields of science.

Hamilton College, a liberal arts college which limits its enrollment to 600 men, was established in 1793 as the Hamilton-Oneida Academy by Samuel Kirkland, a missionary to the Oneida Indians. It was chartered as a college in 1812. Each year it sends over half of its seniors into graduate schools, with medicine, law and business the most popular.

VETERANS ADMINISTRATION

Dr. Jesse F. Casey, leading Veterans Administration psychiatrist, has been appointed head of the Psychiatry and Neurology Service of VA's Department of Medicine and Surgery, effective June 15.

Presently chief of the Psychiatry Division at VA headquarters in Washington, D. C., Dr. Casey formerly was manager of the VA hospital in Topeka, Kansas. While there, he worked closely with the Menninger Foundation in developing the VA hospital's huge residency training program in psychiatry.

Dr. Casey is a native of Goldsboro, North Carolina. He obtained his A.B. degree from Guilford College, and his M.D. degree from the George Washington University School of Medicine in Washington, D. C.

UNITED STATES AIR FORCE

A new medical insignia design consisting of a small silver badge with a serpent entwined on a staff and mounted in its center has been developed and approved for use by Air Force Medical Service physicians and dentists in the near future.

Major General Dan C. Ogle, Surgeon General of the Air Force, announced that the new insignia will enable AF doctors and dentists to be identified more readily. Flight surgeons will continue to wear their wing insignia.

UNITED STATES

ATOMIC ENERGY COMMISSION

The Atomic Energy Commission has approved a proposed regulation establishing procedures and criteria for granting permits for access to confidential and secret restricted data relating to civilian uses of atomic energy under a program announced April 20, 1955. Restricted data which is primarily of military significance is not within the scope of this program. The proposed regulation will be published in the Federal Register, giving official notice of proposed rule making, and a thirty-day period will follow during which the public may submit written suggestions and comments.

Under the "access permit" program confidential restricted data may be made available to any person who can show a potential use or application of the information in his business, profession, or trade. However, secret restricted data may only be made available to persons evidencing a need, limited to a definite period of time, for specific information having an immediate or significant effect upon their business, profession, or trade. Each individual who is to receive confidential restricted data pursuant to an access permit must obtain an "L" clearance. "Q" clearances are necessary to receive secret restricted data.

Conditions under which an applicant may qualify for access are set forth in the regulation, a copy of which is attached. There are also attached sample application and access permit forms.

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The Month in Washington

For the first time in many years, there is a strong possibility that Congress will enact legislation providing federal grants to medical schools. Unlike most bills of the past, which would have given the schools money for salaries and other operating costs, the bill getting most attention now would give money only for construction and equipment.

Action first came in the Health Subcommittee of the Senate Labor and Welfare Committee. Senator Lister Hill (D., Ala.), chairman of the subcommittee as well as the committee, is the principal sponsor of the bill. Senator Hill, long interested in health legislation, was a co-sponsor of the hospital construction act that has been in operation for eight years.

Under the education bill the federal government would grant a total of \$250 million to medical schools at the rate of \$50 million a year for five years. No school could receive more than \$3 million. New schools would receive 50 per cent of construction and equipment costs (up to \$3 million limit), but existing schools would receive only one-third, unless they agreed to increase freshman enrollment by at least 5 per cent. If they wished, schools could set aside 20 per cent of the federal grant into a permanent endowment fund, with earnings to be used for maintaining the building and equipment.

Nearly a score of medical school deans appeared before the Hill subcommittee to urge approval of the bill. Also supporting it were the American Medical Association and the American Dental Association, the latter on condition that dental schools also be included. There were no opposition witnesses before the Hill subcommittee.

The A.M.A. witnesses were Drs. F. J. L. Blasingame, a trustee, and Walter S. Wiggins, associate secretary of the Council on Medical Education and Hospitals. Dr. Blasingame reviewed efforts of the Association since its founding to improve medical education. He cited evidence to show that medical training in this country now is the best in the world, and that the supply of physicians is increasing at a faster pace than the population.

Dr. Wiggins urged the subcommittee to make two changes. He asked that the finan-

cial inducement offered for increased enrollment be dropped, as it might cause some schools to take in more students than they could train properly, a fear that was reflected also in the testimony of some of the medical school deans. He also presented the A.M.A. recommendation that the law require that six members of the Council on Medical Education be "leading medical authorities."

In the House, the Interstate and Foreign Commerce Committee, facing a heavy schedule of hearings on other bills, was slow to take up the medical education bill. But there, too, its prospects are good, particularly as the bill is sponsored by Chairman Percy Priest (D., Tenn.), whose role in medical bills compares with that of Hill in the Senate.

It appears now that Congress also is willing to go along with the Defense Department once again and extend the doctor draft act for another two years. It is scheduled to expire next June 30. The A.M.A. opposes an extension, maintaining that a more attractive military medical career and better use of uniformed physicians would take care of the services' need for experienced specialists and administrators. The department's main argument for an extension was the need for these older men. Before reporting out the bill, however, the House Armed Services Committee made one significant change. It rewrote the bill to exempt any physicians 35 years or older who had applied for a commission at any time in the past and had been turned down solely because of physical condition.

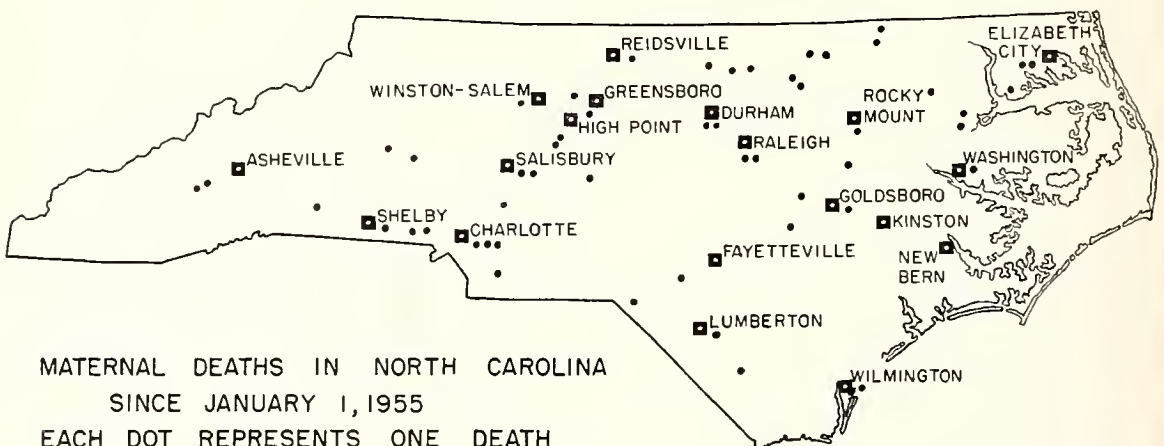
Also moving ahead on the legislative

course is a bill to continue the \$100 per month equalization pay for physicians and dentists in uniform. At hearings before the House Interstate and Foreign Commerce Committee the A.M.A. supported the special pay extension, but objected to one provision. The bill originally would have withheld the \$100 from men with an obligation under the regular draft unless they agreed to serve for more than the two-year draft obligation. The House Committee eliminated this section. As the bill went to the House, it provided that all commissioned medical and dental officers receive the special pay.

Still undecided was the fate of a Defense Department's bill for medical and dental scholarships. Scholarships would cover subsistence as well as all school expenses. A student receiving aid for a year or less would have to serve on active duty for an extra year; if the scholarship were for more than a year, he would have to spend three extra years on active duty.

At this writing Congress continues to show no particular interest in reinsurance of medical insurance plans, a bill that the administration considers important. Nor have hearings been scheduled yet on the no. 2 administration bill, that providing federal guarantee for mortgages on such health facilities as hospitals and clinic.

Routine hospital admission X-rays are paying dividends, not only in better and earlier diagnosis as it regards tuberculosis, but also in the fact that other chest disease conditions are found in the complete examination of the chest which follows if there are any suggestive findings on initial X-ray. —Edward A. Piszczek, M.D., The Ill. Med. J., March, 1952.



NORTH CAROLINA

Medical Journal



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IN THIS ISSUE:

ACTIVITY OF THE CEREBRAL CORTEX IN PRIMATES

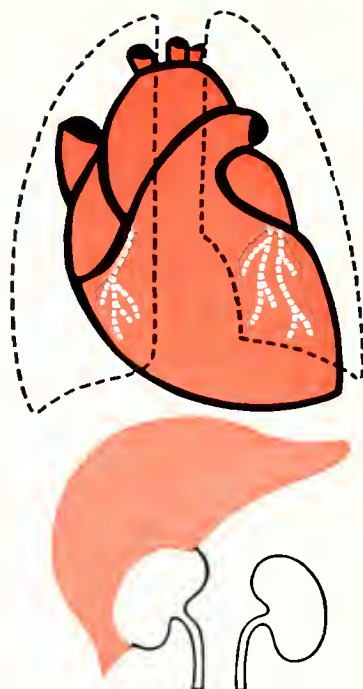
— MARION HINES, M.D.

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THE ANATOMIC BASIS FOR A NEW CONCEPT OF THE FUNDAMENTAL ACTIVITY OF THE CEREBRAL CORTEX IN PRIMATES

MARION HINES, Ph.D., Sc.D.

ATLANTA, GEORGIA

It is a privilege to honor the memory of Ross Herman Jennings Bryson, whose academic record, personality, and originality were so exceptional that his intense interest in the nervous system promised a life devoted to further our understanding of its function. I envy those who knew and taught him; because, the discovery of an original mind in a student, who is also beloved, is a rare and precious experience. May the story I plan to tell be worthy of commemorating the promise of such a young man.

"We live" between two sheets of epithelium, one within and one without, each supported by a ubiquitous connective tissue: "and move" by the contraction of muscle tissue, supported by or attached to connective tissue: "and have our being" within nervous tissue, which pervades the connective tissue and innervates epithelium and muscle. Contact with the world within and the world without is maintained by this tissue. I shall analyze and discuss some of the interrelations of the cells which form the anatomic substrate of the master tissue of the animal body.

The great ascending sensory systems of somaesthetic sensibility, of hearing, and of sight present as few as three neurones between their respective end organs and their particular projection areas within the cerebral cortex. Each of these systems has a particular region within the dorsal thalamus where their neurones of the second order synapse with neurones of thalamocortical fibers.

The cortical region of reception for each of these three corticopetal systems is restricted to a relatively small area of cortical space. These three areas are the sensory projection areas. To them another is added, the motor projection area (fig. 1). When I was a medical student at the University of Chicago, and for many years thereafter, only one descending or motor system—the pyramidal or corticospinal tract—was recognized. At that time this motor system was thought to stem from cells within, and only within, the motor projection area.

Between the motor projection area and the three sensory projection areas lie many cubic centimeters of cortical tissue, more in man than in other primates (compare figure 1 with figures 2⁽¹⁾ and 3⁽²⁾), the association areas. These areas, in spite of data to the contrary in the older literature, were taught as being independent of thalamic nuclei. The nerve impulse supposedly arrived at a sensory cortex, transferred by inter-cortical association fibers to an association area, thence to the motor cortex, and down the corticospinal tract to the ventral horn cells. These linked chains of neurones arose in the periphery, ascended to the cortex, traversed that organ, returned by a certain descending tract, and thence, via the peripheral nerves, to muscle. Why was neurology, at that time, difficult for medical students?

During the past 20 years additional corticofugal systems were recognized. Each great posterior lobe presented its own, whereas the frontal lobe took the major part.

The Second Bryson Memorial Lecture, the University of North Carolina, Chapel Hill, February 26, 1953.

From the Department of Anatomy, Emory University School of Medicine, Atlanta, Georgia.

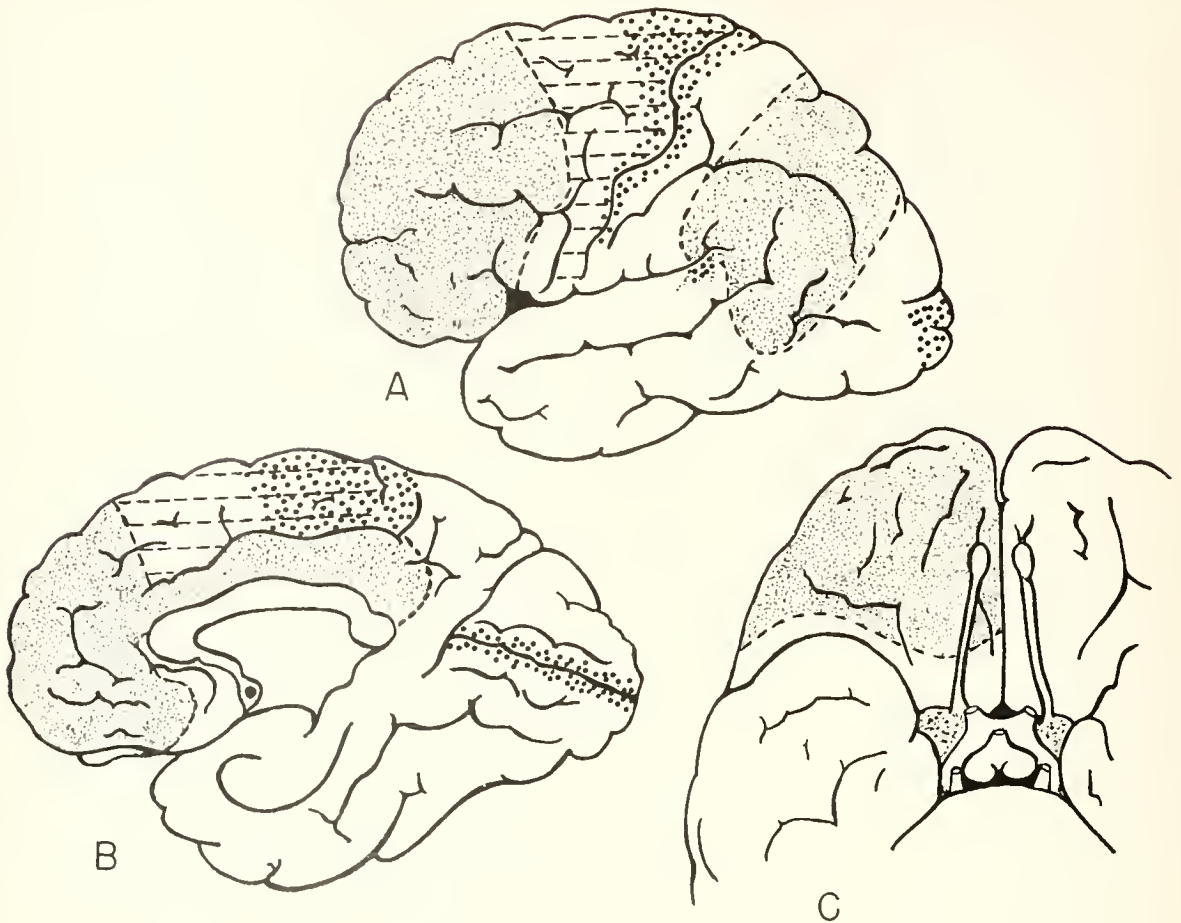


Fig. 1. Line drawings of the lateral (A), the medial (B), and the orbital (C) surfaces of the human cerebral cortex, showing the projection areas, motor and sensory (large dots), and the areas of projection of the thalamic nuclei of association (small dots), as well as that of the nucleus ventralis lateralis (broken lines). The sensory projection area for hearing (Heschl's transverse convolutions) is shown as though seen through the superior temporal gyrus.

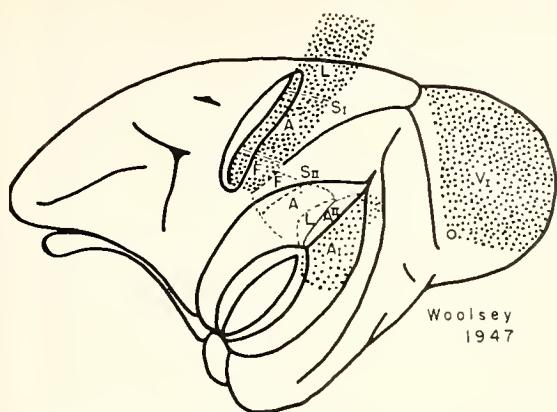
The prefrontal area receives the projection of the nucleus medialis, and the gyrus cinguli, that of the nucleus anterior. The nucleus lateralis posterior projects to the superior parietal lobule, and the pulvinar, to the inferior parietal lobule as well as to the junctional region of the occipital and temporal lobes.

Within the past 15 years an increased number of corticopetal systems became known, and association areas were recognized as projection areas also, for the projection of thalamic nuclei of association (fig. 1).

Using the old method of retrograde degeneration, Le Gros Clark⁽³⁾ and Walker⁽⁴⁾, in 1936 and 1938 respectively, outlined upon the cortex cerebri of the macaque the projections of these nuclei of the dorsal thalamus, which do not receive terminals of ascending sensory systems. The nuclei are the nuclei of association (fig. 4). The frontal lobe received throughout the extent of the area frontalis granularis, axones arising in the nucleus medialis, called by Walker the nucleus medialis dorsalis; the parietal lobe and the temporal lobe entertained those

springing from the nucleus lateralis posterior; whereas the three posterior lobes shared the projection of the pulvinar and the nucleus lateralis posterior. Upon the medial surface of the "limbic lobe" the receptive area for the nucleus anterior was confined to the gyrus cinguli⁽⁵⁾. For the sake of completeness, a small thalamic nucleus, the nucleus lateralis dorsalis, projects to the cortical surface about the ventral tip of the central fissure. Besides this small nucleus, the four large nuclei of association—the nucleus anterior, the nucleus medialis, the nucleus lateralis posterior, and the pulvinar—project upon the association areas of the cerebral cortex.

The nucleus ventralis lateralis, which sends corticopetal fibers to the whole of the

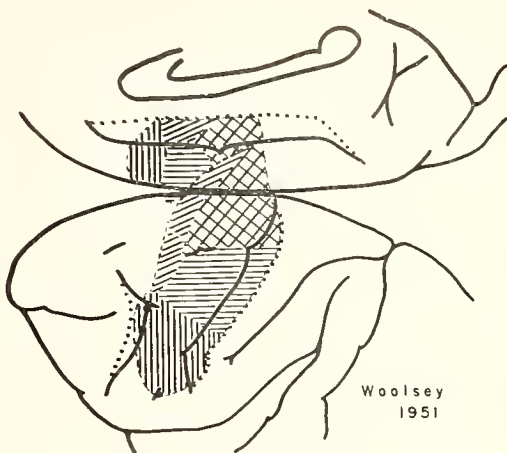


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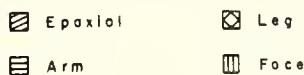
Fig. 2. Line drawing of the lateral surface of the cerebral cortex of the macaque's brain. The lateral fissure is shown as opened. The sensory projection areas or the sensory areas I are outlined with large dots; whereas, sensory areas II are bounded with broken lines. (Redrawn from Woolsey's figure 1 C, Woolsey, C. N.: Patterns of Sensory Representation in the Cerebral Cortex, Federation Proc. 6:437-441 [June] 1947.)

area frontalis agranularis (the denser projection is posterior), is strictly a nucleus neither of sensory reception nor of association. This nucleus, apparently unrelated to others of the lateral nuclear mass, is activated by the terminals of the brachium conjunctivum.

Thus, by this method of analysis, a large group of thalamic nuclei escaped possession of cortical projection fibers. They are the intralaminar nuclei (the centralis medialis and lateralis), the cephalic pole of the reticular nucleus, the centre median, the nu-

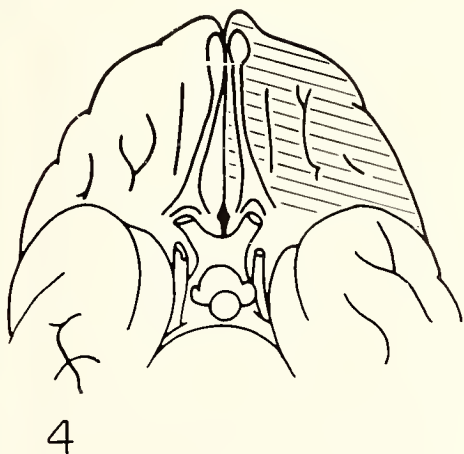
Woolsey
1951

REPRESENTATION OF MUSCULATURE



3

Fig. 3. Line drawing of the lateral surface and the adjoining medial surface of the precentral motor cortex of the macaque's brain. The fissures are drawn as though opened, in order to reveal the motor areas which lie within. The precentral motor cortex occupies the precentral gyrus, the anterior bank of the central fissure and the posterior bank of the inferior precentral fissure, as well as a part of the medial surface. The supplementary motor cortex occupies the medial surface anterior to the leg area of the precentral motor cortex. (Redrawn from a figure made by Woolsey and used by Erickson and Woolsey in their paper presented before the American Neurological Association in 1951.)



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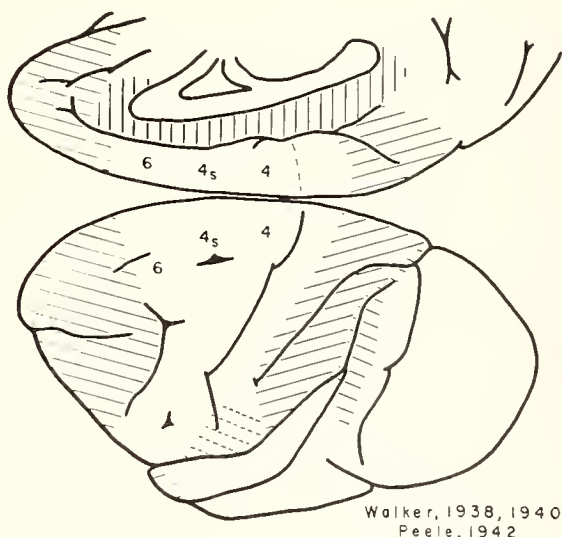
Walker, 1938, 1940
Peele, 1942

Fig. 4. Line drawing of the projection of the thalamic nuclei of association upon the lateral, medial, and orbital surfaces of the cerebral cortex of the macaque. (This drawing was made from data presented by Walker [1938; 1940] by Peele [1942], and by Rose and Woolsey, 1948).

Table I
NUCLEI OF THE DORSAL THALAMUS

Cortical Projection		Without Cortical Projection
Nuclei of Sensory Reception	Nuclei of Association	
medial geniculate body*	nucleus anterior†	cephalic pole of the reticular nucleus‡
lateral geniculate body*	nucleus medialis†	nucleus ventralis anterior†
nucleus ventralis posterior* (lateral and medial)	nucleus lateralis posterior† pulvinar† nucleus lateralis dorsalis	intralaminar nuclei‡ nuclei of the midline‡ inferior part of the medial nucleus‡ centré median‡
From Cerebellum		
nucleus ventralis lateralis*		

*non-recruiting nuclei

†receive recruiting waves from recruiting nuclei

‡recruiting thalamic nuclei

An outline of the nuclei of the dorsal thalamus classified as those which project to the cerebral cortex and those for which no such projection was found by Walker (1938). Those which project to the cerebral cortex are classified as nuclei of sensory reception and as nuclei of association, together with the nucleus ventralis lateralis, which receives the terminals of the dentato-thalamic tract. The recruiting response of each nucleus as given by Starzl and Whitlock (1952) is indicated.

cleus ventralis anterior, the magnocellular part of the nucleus medialis dorsalis, and the nuclei of the midline. The last four of this group of six send efferent fibers either to the hypothalamus or to the nucleus caudatus and the putamen.

Omitting the nucleus ventralis lateralis, the dorsal thalamus contains three kinds of nuclei, two of which project to the cortex cerebri: (1) the nuclei of sensory projection, (2) the nuclei of association, and (3) the nuclei, which by the methods used, have no cortical projection(table 1).

Thirty-five years ago Winkler⁽⁶⁾ wrote that each thalamic nucleus sending fibers to the cerebral mantle, received fibers from the area of its projection (see Head⁽⁷⁾). In large part this has been proved true, at least in the macaque, by a combination of the methods of retrograde degeneration and that of the Marchi technique. No corticogeniculate system has been found in man. It is present in the monkey. Although reciprocity of thalamocortical connections is usually characteristic of the monkey, Peele⁽⁸⁾, in 1942, found no corticipetal fibers to match the corticifugal projections from area 3 to the nucleus lateralis posterior, from areas

5 and 7 to the nucleus ventralis posterior, and from area 5 to the nucleus medialis dorsalis. The anatomic basis for the "looped circuit" was known long before the term itself was conceived.

The great core of the brain stem, around which the ascending systems are placed, was named the reticular formation in the medulla oblongata and the tegmentum in the midbrain and thalamus. The comparative neurologist has noted that this mass of nerve cells and nerve fibers has not decreased in phylogeny. Rather, the reticular formation has increased until it occupies, in the rostral pole of the medulla oblongata and midbrain, the great bulk of the nervous tissue. For example, at the level of each cranial nerve in man, the reticular formation presents specialized nuclei. Out of this formation, such gigantic groups of cells as the nucleus ruber and the substantia nigra developed in the mammalian midbrain. Large groups of nuclei were added to each of these midbrain nuclei in primates. This great region defied analysis by the older methods of defining neurone length. Those closely packed nerve fibers were interrupted by the interposition of small and large nu-

clear groups. For many years I told my students of neurology that the reticular formation must be of primary importance in the economy of man, because it had continued to grow in size and complexity during phylogeny, and that should someone become able to injure this system, leaving intact the long ascending and descending systems, its function would probably be learned. I was a truer prophet than I dreamed.

The analysis of the anatomic relationships of neurones is no longer dependent upon ablation, the Marchi technique, or the method of retrograde degeneration. Rather, the assembly of new data is made possible by the development of electrical stimulators, of electrical recordings, and by the simplification and modification of the Clark-Horsley apparatus. Structures deep within the brain stem can now be destroyed or stimulated locally, while electrical activity of a distant nucleus is recorded concomitantly.

The reticular system (the reticular formation and the tegmentum) contains both ascending and descending axones. The descending systems, yielding in part to the older methods of analysis, stem from the hypothalamus, the midbrain tegmental nuclei, and even from the cortex cerebri. These systems⁽⁹⁾ inhibit or facilitate both tone and movement. The ascending fibers are a complex group, some stemming from reticular nuclei, whereas others are collaterals of ascending sensory systems⁽¹⁰⁾. Not only do collaterals from the lemniscus systems, the lateral, the medial, the trigeminal, and the spinal⁽¹¹⁾, enter the reticular system—a recent rediscovery by Magoun⁽¹²⁾ of Winkler's finding⁽⁶⁾; but also, axones from the nucleus of the fasciculus solitarius⁽¹³⁾ and from the posterior accessory optic tract (fibers unmedullated in the monkey, Gillilan⁽¹⁴⁾; in man, Marburg⁽¹⁵⁾). The reticular system contains, therefore, not only facilitatory and inhibitory systems, but also contributions from the ascending visceral sensory systems and from each of the somatic ascending tracts, including the vestibular⁽¹⁶⁾.

In 1939 Ranson⁽¹⁷⁾ found that interruption of the reticular system dorsal to the hypothalamus produces a monkey distinguished by lack of motor initiation, by a mask-like face, and by the loss of the desire to eat. Ten years later a lesion placed at the cephalic end of the midbrain⁽¹⁸⁾ produced a comparable result. This general hy-

pokinesis was interpreted as the result of reduction of background excitation in the spinal cord by severing the connections of the extrapyramidal corticofugal system within the reticular formation. These animals seemed to show "a lack of the will to move, a paralysis of volition, not one of movement." The corticospinal tract remained intact. Furthermore, a defect at the cerebral level was present.

This defect warned that injury to the ascending fibers in the reticular system produced an effect at the cortical level. Elimination of this system in the medulla oblongata, sparing the long ascending sensory systems, was followed by a change in the activity of cortical neurones such that many of them discharged simultaneously. A more striking change, however, followed the interruption of this system in the midbrain or in the thalamus (subthalamus or hypothalamus). The animal slept and the electroencephalogram of the cortex cerebri showed the long, slow waves and spindle bursts of sleep⁽¹²⁾. On the other hand, when physical interruption was confined to the periaqueductal grey of the midbrain or to the long sensory pathways, the animal (cat) remained behaviorally awake and the electroencephalogram demonstrated the low-voltage, fast activity of alert wakefulness. When such a cat sleeps, either tactile or auditory stimuli will arouse it and will activate its electroencephalogram to that of the waking state. But, after interruption of the cephalic end of this activating system, auditory and tactile stimuli can induce a degree of behavioral arousal and activate the electroencephalogram of wakefulness. Nonetheless, this electroencephalographic activation (asynchronization) terminated almost immediately after the arousing stimulus ceased. The animal slept, and the electroencephalogram was that of sleep.

What thalamocortical pathways transmit the electrical activity normally induced in the ascending division of the reticular activating system to the cerebral cortex? In 1942 Morison and Dempsey⁽¹⁹⁾ discovered a thalamic system in cats from which recruiting wave responses were evoked over widespread areas of the cortical mantle by direct repetitive low frequency stimuli of thalamic nuclei. This recruiting response resembled spindle bursts and was recorded

from the cortex under barbiturate anesthesia.

This diffuse thalamic projection system, first explored in the cat by Starzl and Magoun⁽¹⁰⁾, was organized within the medial nuclear group of the dorsal thalamus—the very nuclei for which Walker⁽²⁰⁾ found no cortical projection. The nuclei of the midline, the intralaminar nuclei, the nucleus ventralis anterior, the cephalic pole of the reticular nucleus, and the central median gave excellent recruitment to cortical areas when stimulated directly with a current of low frequency (7.5 per second), and of specific characteristics (a voltage of 1 to 7, and a falling phase of 1 ms). Besides these non-cortical projection nuclei, the nucleus anterior, the nucleus medialis dorsalis, the nucleus lateralis posterior, and the pulvinar also gave recruiting responses (see table 1). No recruiting activity was discovered in the sensory nuclei or in the nucleus ventralis lateralis. Excitation of any one of the recruiting nuclei evoked a sweep of recruiting waves in all of the other recruiting nuclei. The more rostrally lying nuclei showed the greatest potential response, and of these the nucleus ventralis anterior was the most intense focus. These nuclei constitute a neural unit oriented caudo-rostrally, and discharge as a mass. The principal radiations to the cerebral cortex were rostralward from the cephalic part of the thalamus and lateralward via the nucleus lateralis posterior and the pulvinar. The cortical receiving regions were confined to the association areas. The somatic, the visual, and the auditory projection areas were uninfluenced by stimulation of the thalamic recruiting nuclei.

A similar analysis of the diffuse thalamic projection system in the monkey⁽²¹⁾ uncovered a similar, but not identical, organization of recruiting thalamic nuclei. In the monkey the effective stimuli were characterized by a lower frequency (5-6 per second) and a lower voltage (1-4v). The thalamic sites of origin of this diffuse system were similar to those in the cat. The nucleus ventralis anterior at the rostral end of the system was the most excitable as in the cat; whereas the medial nucleus was more strongly implicated. The latter nucleus is the only one of the association nuclei in the monkey's thalamus which will elicit cortical recruiting responses.

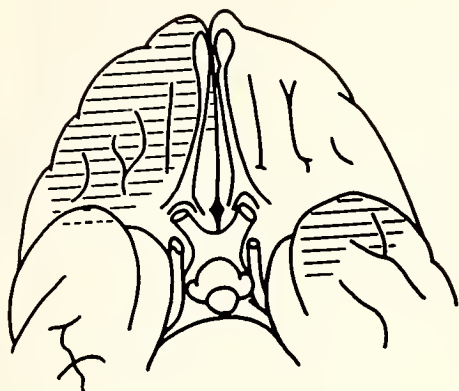
As in the cat, the recruiting nuclei were organized for mass excitation. Recruiting

waves swept caudally with excitation of the rostral nuclei; rostrally, upon stimulation of the caudal nuclei; and both rostrally and caudally, after activation of the middle of the group. Intrathalamic conduction through the recruiting nuclear group extended also to the nuclei of association. The corticopetal impulses appear to be transferred via the association nuclei, not directly. The distribution of the evoked recruiting responses were definitely circumscribed upon the cortical surface, although the distribution of these cortical potentials were identical for each recruiting nucleus, stimulated. The recruiting responses that were located frontally were more intense and reliable than those discovered posteriorly; inasmuch as the recruiting waves were smaller and followed the stimulation frequency less accurately when taken from the parietal, temporal, or occipital lobes than when evoked on the frontal lobe.

The diffuse thalamic projection (fig. 5) covered the lateral surface of the area frontalis granularis, extending caudally over the anterior half of the area frontalis agranularis. This system is strongly represented upon the orbital surface and over a large part of the gyrus cinguli, extending rostrally upon the superior frontal gyrus. Posteriorly, the thalamic recruiting nuclei projected upon Brodmann's area 7 in the parietal lobe, upon the small part of areas 19 and 18 in the occipital lobe, and upon area 38, the ventrorostral tip of the temporal lobe.

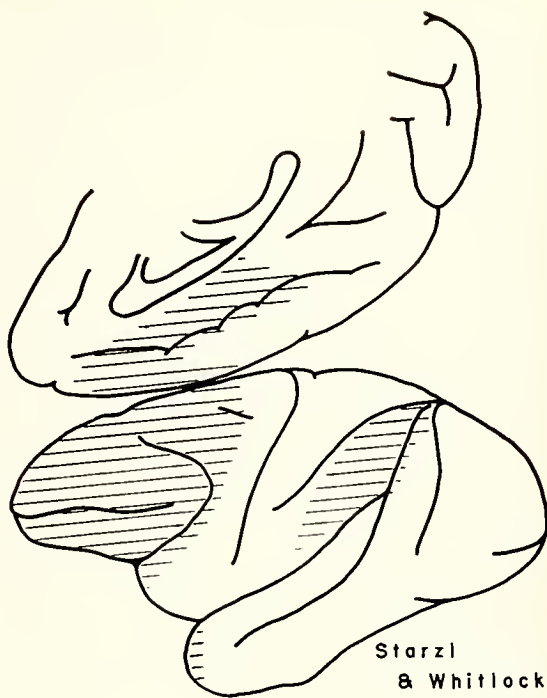
Although these cortical sites of projection of the thalamic recruiting nuclei are also, by and large, coincident with the cortical projection of the thalamic nuclei of association, they are not identical. With one exception the projection of the former occupies less space than that of the latter. The diffuse thalamic projection upon the lateral surface of the frontal lobe trespasses upon the field of the nucleus ventralis lateralis, which is not a recruiting nucleus (compare figure 4 with figure 5). This exception troubled Starzl and Whitlock⁽²¹⁾. They explained this trespass upon the projection field of a nonrecruiting nucleus by hoping that corticopetal fibers from the medial nucleus were present, although unrecognized.

Do the recruiting nuclei follow the general pattern for thalamocortical projection and receive from the area of projection return corticofugal systems? The evidence is



5

Fig. 5. Line drawing of the Diffuse Thalamic Projection upon the lateral, medial, and orbital surfaces of the cerebral cortex of the macaque. These figures were drawn from figs. 7A, 8A by Starzl, T. E., and Whitlock, D. G.: Diffuse Thalamic Projection System in Monkey, *J. Neurophysiol.* 15:449-468 (Nov.) 1952.



Starzl
& Whitlock
1952

incomplete and rests upon the technique of controlled afterdischarge. Since the repetitive stimulation of a cortical area elicits a localized afterdischarge, which usually activates related subcortical centers, it is possible to explore the midbrain reticular formation and the thalamic nuclei for electrical potentials related to a locus on the cerebral mantle, given a repetitive stimulus⁽²²⁾.

Thus corticifugal projections from the anterior cingulate gyrus and the lateral prefrontal area were assigned to the intralaminar nuclei, the *centré median*, the nucleus *ventralis anterior*, and the nucleus *medialis dorsalis*, but not to the nucleus *anterior*; from the tip of the temporal pole to the pulvinar and the nucleus *lateralis posterior*, but not to any one of the recruiting group; from area 19 of the occipital lobe, to the pulvinar and to the intralaminar nuclei. The parietal lobe was not included in this study. Each of the regions studied was also the site of origin of corticifugal systems, terminating in the subthalamus, the substantia nigra, and the midbrain tegmentum.

Apparently, the group of recruiting thalamic nuclei are related as a whole to circumscribed areas of the cerebral cortex, via the nuclei of association. They receive, on their own part, direct corticifugal fibers from the frontal, occipital and parietal lobes,

but not from the temporal lobe. On the other hand, although the majority of the projections between the association thalamic nuclei and the association areas are reciprocal, the cortical association areas do present non-reciprocal corticifugal systems not only to other association nuclei, but also to tegmental nuclei within the midbrain (also substantia nigra) and the ventral thalamus (subthalamus)⁽²³⁾. No degeneration studies have yet shown anatomically the corticifugal systems to the subthalamus and to the generalized midbrain tegmentum, outlined by the electrical method of afterdischarge.

Although in general the thalamocortical systems are reciprocal, nevertheless, two of the three sensory projection areas (the auditory area has not been reported) and each of the association areas present non-reciprocal systems. These non-reciprocal systems as a whole provided for activation of nuclei within the dorsal thalamus or of motor nuclei in the hypothalamus, in the subthalamus, in the tectum or tegmentum of the midbrain. The reciprocal thalamocortical systems provide looped circuits; the non-reciprocal, either for activation of motor centers or for corticothalamic association.

The stimulus given a sensory end organ—be it a Krause end bulb, a muscle spindle, the retina, or the organ of Corti—activates

two separate systems: (1) the long ascending systems, the sensory thalamic nuclei, and the sensory projection areas; and (2) the reticular activating system, the recruiting nuclear mass of the thalamus, and the recruiting cortical areas, to which the associational nuclei known as the association areas of the cortical mantle, also project. Rich reciprocal connections characterize the recruiting nuclei of the thalamus and also relate them to the association nuclei. But are the thalamic sensory nuclei similarly related to the association nuclei? Walker⁽⁴⁾ classified the anterior nucleus as one which synthesizes different aspects of olfactory sensibility; the medial nucleus, as one which correlates visceral and somaesthetic impulses having an affective quality; the nucleus lateralis posterior, for complex somaesthetic integration; and the pulvinar, for sight, hearing, and somaesthetic sensations. These conclusions rest entirely upon conjecture. Myelin preparations may be misleading. The tight fiber plexuses about each of these nuclei have not been analyzed by any method. The lateral geniculate body⁽²⁴⁾ sends no fibers to the pulvinar (Marchi degeneration studies) in the cat and monkey, although a tract from the optic tectum to the pulvinar exists. Destruction of the pulvinar without injury to the lateral geniculate body left the man with a loss of form in the visual fields in which movement and color remained⁽²⁵⁾. It is indeed difficult to relinquish the concept that these nuclei perform some function of association.

Although no direct evidence for intrathalamic association fibers is at hand, may I suggest that the nonreciprocal corticothalamic projections to these nuclei may be the anatomic basis for their assigned function of association. For example, (fig. 6^{4,8,22,23,26}) the nucleus medialis dorsalis receives corticofugal fibers not only from the prefrontal cortex, but also from area 4s⁽²³⁾ and area 5⁽⁸⁾; the nucleus lateralis posterior, from the whole somatic area 1, from areas 5 and 7 of the parietal lobe⁽⁸⁾, and from the tip of the temporal lobe; and the pulvinar, from areas 17 and 19 of the occipital lobe, and from area 38 and area 22 of the temporal lobe⁽²²⁾. The function of association may not be that of synthesis at the thalamic level, but rather that which integrates several corticothalamic impulses and reprojects the so-called synthesis back to the cortical associ-

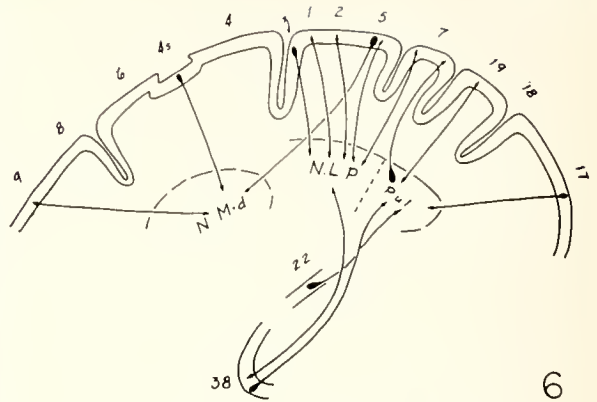


Fig. 6. Line drawing illustrating the corticothalamic and thalamocortical relationships with the thalamic nuclei of association (Abbreviations, N.M.d., nucleus medialis dorsalis, or the medial nucleus; N.L.P., nucleus lateralis posterior; Pul., pulvinar). Lines with double arrows indicate reciprocal thalamocortical neurones; whereas, single arrows indicate the orientation of the thalamocortical or corticothalamic neurones. This drawing was made from data presented by Walker, Peele, Jasper and others, Levin and Hines.

ation regions. Thus the associational nuclei of the thalamus would not function as nuclei of association at the thalamic level, but rather as association for nervous activity received from several cortical areas—(1) the sensory projection areas, and (2) several association areas.

The nucleus ventralis lateralis is not a sensory projection nucleus; nor is it a recruiting nucleus. It has never been given the label of association. Although this nucleus projects to the whole area frontalis agranularis, the densest fiber bundles are distributed posteriorly to area 4⁽⁴⁾. This ventral lateral nucleus receives the terminals of cell bodies lying in the opposite nucleus dentatus, which in turn is activated by the prolongations of Purkinje cells which inhabit the cortex of the lateral hemispheres of the cerebellum. These connections, together with the frontopontile tract from area 4, form the earliest recognized long multiple neurone looped circuit—the frontoponto-cerebello-dentato-thalamo-cortical system of neurones. In spite of this neat chain of recognized neurones, no evoked potentials have been reported as recorded from the cortex of the cerebellar hemispheres by electrical stimulation of the motor cortex, although direct stimulation of this part of the cerebellar cortex has altered the spontaneous action potentials of the contralateral motor cortex⁽⁴⁾.

On the other hand, is it possible that the cerebellar hemispheres receive nervous impulses from the cortex of the anterior lobe or from the cortex of the midline? For if impulses from these parts of the cerebellar cortex reach that of the lateral hemispheres, then the dentato-thalamic system would transmit impulses modified by incoming sensory systems and by corticifugal projections. For example, evoked potentials on the cerebellar cortex of the midline were elicited by stimulation of the motor cortex. These potentials present the parts of a monkey's body as if projected in an orderly way—that is, a topical localization similar to the topical localization of the skeletal muscle which contracted in response to direct stimulation of this part of the cerebellar cortex⁽²⁷⁾. Moreover, potentials evoked by stimulation of somatic area I in the parietal lobe (macaque) show a topical organization of projection⁽²⁸⁾ similar to that outlined for the motor cortex upon the four anterior folia of the cerebellar cortex. Furthermore, proprioceptive sensibility⁽²⁹⁾ and tactile sensibility⁽³⁰⁾ from the ipsilateral part of the body project upon these same subdivisions of the cerebellar cortex and present an identical topical localization.

This triple somatotopical localization is not continued into the anterior vermis; for the folium is the site of potentials evoked by stimulation of the cochlea by click⁽³⁰⁾, and of the auditory cortex⁽³¹⁾ by an electric current; and the tuber, that of evoked potentials elicited by photic stimulation of the eye⁽³⁰⁾, as well as that of electrical stimulation of the visual cortex^(31a,b).

The cerebellar cortex of the midline receives afferent fibers from the peripheral nervous system and from the cerebral cortex in a common region. We do not know whether the cerebellar cortex of the lateral hemispheres receives association fibers from these specialized association-like regions of the cerebellar cortex. If so, the motor area of the cerebral cortex would then be subject to some type of regulatory circuit in which peripheral sensibility and cortical sensory projections have a part. If not, the nucleus ventralis lateralis is activated only, or so it seems, by the cortex to which it projects; whereas this beautiful correlation in the anterior lobe would project via midline nuclei into the reticular formation, contributing to the inhibition or facilitation of tone⁽³²⁾. Until further evidence is presented,

we must conclude that, in spite of the arrangement of neuronc relationships within the cerebellar cortex, the cortex is peculiarly partitioned. Consequently, the anterior lobe, the midline, and the paramedian lobule contribute nothing to the functional activity of the cerebellar hemispheres.

The cortex cerebri presents four great subdivisions—the well known frontal, parietal, occipital, and temporal lobes. Unlike each of the three posterior lobes, organized about a single sensory system, the frontal lobe is organized about a motor system, the well known corticospinal tract. The three posterior lobes share projections from the pulvinar; the parietal and temporal, from the nucleus lateralis posterior. The frontal lobe shares no thalamic projections. Rather, the whole area frontalis granularis is reserved for the projections from the nucleus medialis, the gyrus cinguli, for those from the anterior nucleus. Again, the frontal lobe receives the lion's share of the diffuse thalamic projection. Although each one of the three posterior lobes present corticifugal systems, the variety and number stemming from the frontal is measurably greater⁽²³⁾.

It is common knowledge that the electrical stimulation of the precentral gyrus of primates elicits topical contractions of skeletal muscle. These results fall naturally into contractions of single muscles or parts of muscles, contractions of flexor or extensor sheets of muscles, as well as co-innervation of both flexors and extensors, which in their sequence of contraction resemble the patterns of movement used by the experimental animal in question⁽³³⁾. These results have long been assigned to activation of the corticospinal tract. The electrically excitable cortex is not conterminous with the region known as area 4, either upon the lateral surface or upon the medial surface of the area frontalis agranularis. This medial surface presents in man and in the macaque, not only a topical arrangement of skeletal musculature innervated by the lower lumbar and sacral segments, but also another motor cortex, upon which the muscles of the body are topically, and less perfectly, re-represented. The supplementary motor cortex, first discovered by Penfield in man (full report, Penfield and Welch⁽³⁴⁾), has been completely worked out in the monkey (fig. 3) by Woolsey⁽²⁾. The diffuse thalamic projection skirts the borders of each of these motor cortices.

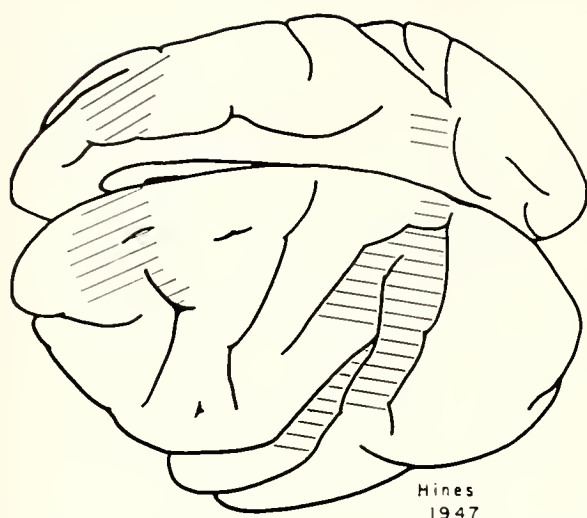


Fig. 7. Line drawing of the extrapyramidal motor areas of the four lobes of the cortex cerebri, as found in the macaque: Used as illustration for "The Motor Areas" (Hines, 1947, not published.)

The electrical current applied to the precentral motor cortex, before or after surgical division of the pyramids, is able to elicit nontopical contraction of muscle and inhibition and facilitation of tone^(23,35). These extrapyramidal activities are better developed in the anterior division of the area frontalis agranularis than in the posterior division.

Besides these specialized motor cortices of the frontal lobe, each lobe of the monkey's cortex presents its own motor center, characterized in common by an adverse field and a quieting effect (fig. 7). The anterior adverse field lies upon the frontal lobe and extends from the anterior border of area 6, over 8, to include a part of Brodmann's area 9. The posterior field spreads over the junctional region of the parietal, occipital, and temporal lobes. The adverse movements vary from simple conjugate deviation of the eyes to that of head and eyes. In the anterior field these adverse movements may increase to include the axis, both opposite extremities, and sometimes even the tail. Orientation of the ears to the side of stimulation is present in each of these fields except that of the parietal lobe. The quieting effect, causing cessation of spontaneous movement, confers upon the animal a curious appearance of attentive repose. Although this effect is generalized, it is more easily and certainly obtained from the anterior field on the lateral surface of Brodmann's area 9 than from the three posterior fields^(23,35).

Each of these fields also yields special results. Stimulation of the posterior field in the temporal and occipital cortex elicits a complex movement of reaching and grasping, whereas that of the parietal lobe (area 7 and 5⁽³⁶⁾) caused elevation of the contralateral shoulder, with or without protraction of the upper extremity. Stimulation of the anterior field (area 8 and anterior 6) produces an orienting movement of head and eyes toward the midfrontal plane⁽²³⁾.

These four cortical motor fields share cortical space with the cortical projections of the thalamic nuclei of association^(35b). The type and site of these artificially elicited movements suggest that the electric current may have uncovered patterns of normal motor responses to significant stimuli. Convergence of the eyes was evoked only from the parietal field (the locale of projection of the nucleus lateralis posterior), perhaps because convergence of the eyes in the macaque relates only to stimuli originating upon the surface of the body (such as the meticulous activity of grooming). The macaque neither reads nor writes, nor threads needles. Constriction of the pupil was located only upon the occipital field (area 18)^(35b,37); but reaching and grasping, found only where the pulvinar projects upon the occipital and temporal lobes, is a response primarily to sight or to hearing, carrying perhaps connotation of an additional sensory correlate. Only in the frontal field did aversion reach completion, so that the whole body was turned away from the stimulus. Only in this field did orientation toward the midfrontal plane occur, suggesting when completed, alerted attention^(35b).

Whatever the connotation of the afferent impulses reaching these motor-association areas, the common motor responses provided in them are rejection and quieting. Each of these phenomena was better developed in the frontal area. Orientation of the body toward a complex stimulus arriving within these association areas appears to be specialized and to bear the mark of the function of the lobe—the bodily stance of attention in the frontal lobe; eyes ready for close examination in the parietal lobe; synergistic movement toward the object in the occipital and temporal lobes.

Since these four extrapyramidal motor fields share the cortical surface with the

projections of the thalamic association nuclei more closely than they do with the projections of the diffuse thalamic system, it is logical to consider that the associative rather than recruiting activity acts as the stimulus which elicits these motor responses.

Completely unrelated to these extrapyramidal motor fields and yet situated within the area of projection of the association nuclei, the stimulating electrode has discovered two more motor fields—one, on the anterior limits of the gyrus cinguli (area 24), the other on the orbital gyri. The former lies beyond the limit of the projection of the thalamic recruiting nuclei, the latter well within it. Stimulation of the cingulate gyrus (Smith⁽³⁸⁾; see also, Ward⁽³⁹⁾) produced a combined effect upon the autonomic and somatic motor nuclei, which read like a description of debilitating fear and behaved like a mounting recruitment of smooth and skeletal muscle, terminating with relaxation. Stimulation of the orbital surface was confined to autonomic effects—instantaneous fall of blood pressure and a subsequent slow rise, arrest of respiration, and rise (6-8° F.) in temperature⁽⁴⁰⁾. The results suggest that the orbital surface may exercise some control over the hypothalamus, to which it sends many efferent systems.

The thalamic recruiting system does not activate the motor cortex itself. If the modern interpretation of the function of the nucleus ventralis lateralis as simply regulatory be true, the motor cortex must depend upon intercortical neurones for its activation, such as that provided by the U fibers from the postcentral-gyrus. And yet, after the bilateral removal of the whole area frontalis agranularis, the total region to which the nucleus ventralis lateralis projects, a macaque is able to run better than he can walk or climb, and to sit and to feed himself in a cat-like manner. He is able to relax, lie quietly if the environment is quiet, and to sleep and awake. He maintains an interest in the happenings in a laboratory, and learns to anticipate the time for feeding and the appearance, at a distance, of a favorite food or of the individuals who feed and care for him.

This type of monkey, however, has lost the fractional use of musculature; movement is slow and difficult to initiate, unless the animal is excited; and relaxation of skeletal musculature is likewise slow and extra-

ordinarily difficult. Aim cannot be readjusted after a movement has been initiated. Once begun, the whole movement must be completed. Inhibition of movement and fixation does not occur. Instead, fixation is achieved by movement into the desired position, followed by holding onto an immovable object. The facial musculature continues to be used to express a monkey's emotions, and that about the eyes is unchanged. The pyramidal system and the majority of the extrapyramidal motor systems have been destroyed, as well as those which inhibit tone⁽²³⁾.

On the other hand, if the operation is confined to the area outlined by Starzl and Whitlock (an area which approached the boundaries of area 6 and the anterior border of area 4; compare figure 8 with figure 5), for the projection of the diffuse thalamic system upon the anterior division of the precentral motor cortex, tone is greatly increased in flexors and extensors alike. Movement, even in a large runway, is painfully slow because relaxation is so tardy. The facilitation of tone has lost a major part of its opposition⁽²³⁾. Removal of the anterior

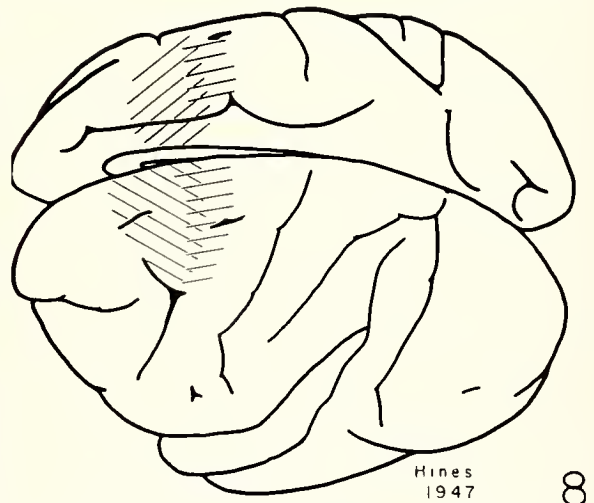


Fig. 8. Line drawing of the extrapyramidal motor, inhibitory, and facilitory areas in the anterior half of the area frontalis agranularis of the frontal lobe (*Macaca mulatta*). The anterior field (area 6 plus anterior 4) yields flexor synergies, reaching and grasping, inhibition of flexor tone and of the grasp reflex, when stimulated with the sine wave current. With similar electrical stimulation, the posterior field (anterior area 4 plus posterior 6) yields quadrupedal progression, extensor synergies, standing tone, and inhibition of extensor tone. These phenomena were obtained after the medullary pyramids were surgically divided. This figure was used as an illustration for "The Motor Areas" (Hines, 1947, not published).

part of this area is followed by appearance of the grasp in the opposite hand⁽⁴¹⁾; of the posterior part, by increase in standing tone, brisk and irradiating reflexes, clonus, and a minimal paralysis, confined to abductors of the toes and the adductors of the femur⁽⁴²⁾.

Electrical stimulation of the anterior division (area 6) is able to elicit flexor synergies and inhibit tonic innervation of the flexors and the grasp reflex; of the posterior division (area 4s), to evoke quadripedal progression, extensor synergies and inhibit tonic innervation of the extensors (fig. 8). Frequently, increment in tone follows stimulation of either area. These results have no topical organization and are obtained subsequent to surgical division of the pyramids (see Hines⁽²³⁾). Each of these areas send efferent fibers into the reticular formation; those springing from area 6 disappear in that formation, laterally in the medulla oblongata, whereas those arising from area 4s terminate within a reticular nucleus of the midbrain and within the medial part of the reticular system in the medulla oblongata (Hines, unpublished).

After removal of that part of the precentral gyrus which lies posterior to the projection of the diffuse thalamic recruiting system (see fig. 5), the monkey loses for a short time the differential use of skeletal muscle opposite the lesion, and for years tone is less in these muscles⁽²³⁾. Nerve fibers stemming from this region terminate laterally in the reticular formation of the medulla oblongata. Moreover, when the postcentral gyrus is removed, a severe loss of tone follows, but no degeneration within the reticular formation was observed⁽³⁶⁾. Degenerated fibers were seen, however, in the spinal cord within the general locus assigned to the corticospinal tract⁽⁸⁾.

Bilateral ablation of the area frontalis granularis⁽⁴³⁾ produces a restless, easily distracted animal, characterized by a short memory. No changes in the use of skeletal muscle, in the normal distribution of tone, or in either the deep or the superficial reflexes are present. The blink reflex, however, has vanished. At first, these animals wear a tense, probably anxious expression; later, after years, a smooth, unwrinkled face. They seem to have lost a certain indefinable contact with their environment. The technicians call these monkeys "goofy."

A combination of these ablations of the

frontal lobe, excluding the facial areas of the precentral motor cortex, produces a monkey without facial expression. The wide open round eyes follow moving objects or individuals, seeing without understanding. All contact with environment is lost. Threatening gestures receive no response. Nothing is learned. The will to eat has vanished. They have to be forcibly fed. Although periods of sleep and wakefulness follow each other in normal rhythm, no relaxation of muscle occurs during the former. Reaching and grasping are the only movements performed by the upper extremity; alternate limited flexion and extension in a bipedal rhythm, the only movement of the lower extremity. The fact that the three posterior lobes, with which animals and man have been thought to learn, were intact was of no avail. The motor areas for facial expression were never used for recognition. Indeed, such a monkey presents the appearance of an idiot⁽²³⁾.

For more than a decade I have been puzzled by this result, just as I have been puzzled about the afferent side of the reflex which enabled area 6 and the anterior border of area 4 to make their contributions to tone. The projection of the recruiting thalamic nuclear mass by way of the nucleus medialis dorsalis on the frontal lobe may offer an explanation. The reticular activating system so necessary for arousal in cat and monkey sends its major projection to the anterior part of the frontal lobe, keeping the animal awake and in contact with the environment. The loss of this alerting system, into which all ascending systems send collaterals, appears to contribute some component necessary for the proper appreciation of the sensory stimuli themselves. Certainly in this monkey, the significance of sensory stimuli seems to have vanished in spite of the diffuse thalamic projection via the nucleus lateralis posterior and the pulvinar. Starzl and Whitlock's finding that the recruiting potentials on the posterior projection region were damped whereas those in the anterior cortical area were not, may be the expression of a qualitative difference in the function of these two areas. It seems, therefore, that the learning process, long assigned to the association areas of the three posterior lobes, cannot take place without the presence of the thalamic projection to the frontal lobe.

When only a part of the anterior diffuse

projection area is removed, as in the bilateral prefrontal monkey, memory is short, the attention span disturbed, and movement increased; but the recognition of food, the opposite sex, and the human beings who care for them is retained. In such a preparation, the areas of projection of the diffuse thalamic system on the gyrus cinguli and that upon the lateral surface, posterior to the inferior precentral fissure, were spared.

Comparison of one result of amputation of the dominant occipital lobe in man⁽⁴⁴⁾ with one of those which follow cutting the projection of the medial nucleus on the prefrontal area in lobotomy in man suggests a fundamental difference in the function of these two association areas. The first patient was able to identify an orange by smell, not by sight; a bell, by sound, not by sight. The second type of patient is able to name any object or group of objects by sight, hearing, or smell, but seems to be rather indifferent to the object. The stimulating object is interpreted upon a lower level of awareness, for it has lost a certain connotation which it previously possessed⁽⁴⁵⁾.

In the light of these findings, the result of electrical stimulation of the extrapyramidal motor fields of the monkey's cerebral cortex takes on new meaning; for, as noted previously, the association area of each lobe in that animal's cortex is provided with motor responses which allow examination of an object in terms of the sensibility about which the lobe is organized: convergence of the eyes and shifting the proximal musculature of the upper extremity in the parietal lobe; orientation of the ears in the temporal lobe, and reaching and grasping in the occipital and temporal lobes. Although each of these posterior areas provides for quieting and partial rejection, the prefrontal field presents a lower threshold for the quieting effect, and two patterned movements, one of complete rejection and the other of alerted attention. These patterns of body adjustment, obtained from the prefrontal field, may express a response to the affect which surrounds the stimulating object.

Although it is impossible at the present time to separate the affect which the nucleus medialis appears to transmit to the prefrontal area from the general alerting considered to be the activity of its projection as a part of the recruiting system of the thalamus, it is difficult to believe that

the activity of the diffuse thalamic projection to the anterior division of the precentral motor cortex (for this region receives no known corticopetal projections from the nucleus medialis) is confined only to keeping this piece of cortex awake. I suggest that the recruiting activity projected upon area 6 and anterior area 4 may contain the afferent fibers from the ascending reticular systems in a multineurone circuit, the efferents of which terminate in the reticular formation of the midbrain and medulla oblongata. Certainly the fact that area 6 and the anterior border of area 4 (4s) present separate corticofugal systems which terminate within different loci of the reticular system suggests that a comparable ascending system exists.

Thus, if this logic be a true interpretation of fact, the motor systems, similar to the sensory systems, would present a dual control of tone, which stems from the precentral motor cortex—one linked with the pyramidal system and its satellites, which insures reciprocal innervation and a degree of tone in the activation of musculature, modified via the cerebellum and the nucleus ventralis lateralis and perhaps by way of intercortical connections with the parietal lobe; and *the other*, within the reticular system, which appears to be able to shift tone into extensors or into flexors without concomitant movement.

In this connection we must not forget that somaesthetic sensibility, hearing and sight, and their respective sensory projection areas meet in specific parts of the cerebellar cortex, from which efferent fibers arise and terminate in the reticular formation of the medulla oblongata, and that the region of this cortex into which somaesthetic sensibility terminates is also the region which inhibits tone via the reticular formation. The inhibition rather than the facilitation of tone seems to be dominant in the precentral motor cortex; whereas facilitation as well as inhibition is the effect of the cerebellar cortex upon the reticular system.

Extrapyramidal motor systems stem from the whole precentral motor cortex. Magoun interpreted the hypokinesia which resulted from a high midbrain lesion of the reticular system as the loss of the extrapyramidal facilitory systems. And Wagley⁽⁴⁶⁾ found that cutting the ventrolateral funiculus in the monkey was followed by a peculiar reluctance to move, not a paralysis. The great

pyramidal system to which, for years, has been allocated our capacity for volitional acts needs the facilitory support of extrapyramidal systems, the inhibition and facilitation of tone, part of which stems from the frontal lobe itself, whereas part is contributed by the cerebellum through a long-looped-multineurone circuit, and part via the reticular formation. The afferent arcs which control the complexity of purposeful voluntary movement in skilled performance are not confined to those which spring from terminals within skeletal muscle and joints. For the aim which skilled performance realizes is not an achievement of the precentral motor cortex alone, with its intercortical connections from the parietal lobe. The interpretation of distance, the meaning of the object sought, and that part of the control of the manipulation dependent upon sight seem to be the contribution of the occipital lobe.

In skilled performance directed toward a given end, the innervation of the muscles of the leading extremity takes place in a given order. The initiation of a movement, made by the contraction of the prime movers, is aided by the contraction or tonic innervation of the cooperating muscles, by fixation of the more proximally lying, or even on occasion by the more distally lying muscles, as well as by the contraction or relaxation of the antagonists. In such movements the "fusilade" innervation of the cooperating extremity is as important as the differential use of musculature of the leading extremity. The precentral motor cortex makes possible the stopping of a movement at any degree of contraction and starting it again at another degree necessary to follow through to the chosen end.

Posture must not only be maintained in an easy and natural way to free the hand for manipulation, but adjustments to the next phase of the movement must also be anticipated. Stereotyped movement patterns and flexor or extensor synergies, such as those which survive removal of the precentral motor cortex, can be split and utilized in parts or as a whole.

Through its intercortical and subcortical relationships the precentral motor cortex becomes the chief executor of the cerebral mantle. And its integrity in an intact nervous system allows us to express the increment of what we have learned through the

maintenance of the interactivity of thalamus and cortical tissue.

A new concept of the activity of the cerebral cortex springs from the mutual interrelation of that cortex and the reticular system by way of the thalamic recruiting nuclei and the thalamic association nuclei, together with the motor activity, with which they share cortical space; the very richness of the afferent systems, which penetrate the old reticular formation, suggests that the alertness which characterizes the conscious state is largely determined subcortically. Many neurosurgeons have discovered that lesions near the third ventricle and rostral brain stem are accompanied by unconsciousness; whereas large lesions, restricted to the cerebral cortex, may show "a modification of the content of the conscious state, but not its loss"⁽⁴⁷⁾. Cairns and others⁽⁴⁸⁾, in 1941, reported a patient, who had a cyst in the third ventricle. As the cyst filled and expanded, the patient became mute and lost facial expression and the ability to initiate any kind of active response; but immediately following the tapping of the cyst, speech and interest in the world about returned.

French⁽⁴⁹⁾ outlined the postmortem findings in 5 patients in whom profound changes in consciousness were maintained from four to nine months. In 3 of them the lesion had destroyed a large part of the reticular formation in the rostral brain stem; in the fourth, the lesion was more cephalad, destroying the more rostral part of the dorsal thalamus; but in the fifth, the entire cerebral cortex was involved. Apparently, even incomplete injury to the reticular activating system or its cortical projections makes an otherwise intact cerebral cortex helpless and therefore unable to continue its customary integrative activity.

I have also given the anatomic data upon which rests the interpretation of the thalamocortical looped circuits as reverberating. I have outlined the long, multilineurone circuits in which a part of the output becomes input and is known as a feedback circuit. I have shown you that skilled performance is subject to control at many levels — peripheral, spinal cord, cerebellar and intercortical—and is therefore illustrative of a far more complex servomechanism than the governor on Clark Maxwell's steam engine⁽⁵⁰⁾. Interesting and fundamental as

this translation of qualitative data into electrical terms is, it is still obligatory to use the older methods for interrogating the nervous system and to know the physiology and the anatomy of a region as well as the electrical activity which accompanies physiologic states.

Although contact with the world outside ourselves is limited by the end-organs which explore it, once they have been set in action by the waves of air about us or by contact with an object within it, our very consciousness is maintained, not by the activity of the cerebral cortex itself, but rather by that of the old reticular system which alerts it. And the reticular system alerts this cortex not in the sensory projection areas, nor yet in the motor area, but rather in those areas whose activity seems capable of storing past experience. We are alerted, apparently, to the significance of the object in the posteriorly lying association areas, and, anteriorly, to the affective quality of the object in those regions which provide for rejection or alert attention to it. Dare I say that our learning is primarily dependent upon the reception given the object by the activity of the prefrontal division of the frontal lobe?

"We live," consciously, because the activity of the cerebral cortex is maintained by the reticular system; "and move," because of the support given the pyramidal system by the extrapyramidal systems, which facilitate and inhibit tone and movement; "and have our being," particularly through the activity of the prefrontal region, made possible by its subcortical interrelationship with the thalamic recruiting system and the reticular formation. For now we see the activity of the great cortical mantle in part, and know it only in part, but we look forward to the time when the work of our students shall bring us face to face with the meaning and the significance of the activity of this great tissue which is indeed ourselves.

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Streptomycin and PAS are not bacteriocidal but bacteriostatic. They do not cure or eradicate the disease. Relapses occur and reversion of sputum from negative to positive is frequent. They have markedly improved the prognosis of tuberculosis but have not controlled it.—John H. Skavlem, M.D., The W. Va. Med. J., December, 1952.

OBSESITY AND THE PUBLIC HEALTH

A. HUGHES BRYAN, M.D.

CHAPEL HILL

The medical literature of recent years has witnessed such a spate of papers on obesity that a review of the subject becomes a formidable undertaking. Let us briefly note some of the generally accepted conclusions and then proceed to discuss certain aspects of the subject which are of particular interest to those engaged in public health work.

Obesity may well be the most serious nutritional abnormality in the United States today. It is estimated that one fifth of all persons over 30, or 15 million people, may be 10 per cent or more overweight.

Obesity in adults is associated with an increased mortality proportional to the degree of overweight. It appears to be an etiologic or predisposing factor in several important disease states. Prominent among these are derangements of the cardiovascular-renal system, but the list also includes diabetes and gallbladder disease.

Obesity imposes an added burden of considerable importance to health on the sufferer from many chronic diseases. Cardiac compensation is impaired, the hobbling effects of arthritis are increased, embolism and thrombosis following operation are more frequent, pregnancy involves increased risk, and asthma and bronchitis are more often fatal.

The obese person clings tenaciously to his overweight habitus. Reduction and the maintenance of a more normal weight are associated with difficult privations, and the tendency to regress is almost irresistible.

The basic cause of obesity is ingestion of food in excess of caloric needs. This tendency to overeat, the dynamic phase of obesity, may be a current problem with the patient or it may have been present in his more remote past. But the ultimate cause of the caloric imbalance, be it hereditary, psychogenic or metabolic, is not well understood. Indeed, it appears likely that overeating is the result of multiple factors.

The Diagnosis: Obesity and Overweight

In public health work, an accurate diag-

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From the School of Public Health, University of North Carolina, Chapel Hill.

nosis of the disease under consideration is of primary importance if our statistics, epidemiologic deductions, and control measures are to be valid. Obesity and overweight are not necessarily identical terms; this is particularly true in the central range of the weight distribution curve which includes the greater part of our population⁽¹⁾. The term "overweight" implies a weight greater than some acceptable standard for sex, height, and age; "obesity," a body containing excess fat. As an example of this difference, Keys calls attention to the overweight athlete who is, in fact, lean, and his counterpart, the sedentary business man, who may not be overweight although he is definitely fat.

The diagnostic criterion of relative weight has been employed by most investigators, and the diagnostic term "overweight" should be used for those whose weight is found to exceed that given in the standard table. Unfortunately several standards of weight have been used, making it difficult to interpret and compare the results obtained in different investigations.

The weight table most frequently employed in American studies has been that of the Medico-actuarial Mortality Investigation⁽²⁾, which has found its way into many textbooks, with or without acknowledgment of its source. Although published in 1912, the table is still useful⁽³⁾. A similar standard prepared for the Army was used by Levy and co-workers⁽⁴⁾, and others. In both of these tables, standard weight for a given height increases with age, and no allowance is made for body build. Standards of "ideal" weights for height in men and women were prepared and published by the statisticians of the Metropolitan Life Insurance Company⁽⁵⁾, and have received wide acceptance. Weights are given for individuals with "small," "medium" and "large frames," and the tables allow for no increase in weight with age, since it is believed that the health records are better in those adults who do not gain after the age of 35. A weight standard for Canadian adults, based on a stratified random sample of the population, has recently been published⁽⁶⁾.

The term "obesity," in accord with its Latin derivation, denotes a disproportionately large fat content in the body⁽⁷⁾. Of the several methods available for predicting the fat content of the living human body, only

one—the measurement of skinfold thickness—is suitable for application outside the research laboratory. Fortunately, this measurement appears to be highly correlated with the fat content of the body⁽⁸⁾, and offers a great deal of promise for future investigations. Epidemiologic studies seeking to relate obesity to ill health will be more definitive if a distinction is made between obesity and overweight. The type of instrument used in determining skinfold thickness is of great importance, and before the technique can be applied generally to studies of obesity, it will be necessary to choose standardized body sites for the measurements and to establish norms for age, sex, and possibly other parameters. In this regard, it is fortunate that skinfold thickness, as well as weight, was determined in the Canadian survey⁽⁶⁾, and that the results will soon be published.

Brozek and Keys have reported a study which illustrates the difference in the information yielded by measurements of relative weight and of body fatness⁽⁸⁾. Two samples of healthy men, all within the range of ± 5 per cent of standard body weight, were chosen from the subjects studied at the University of Minnesota. But the relative body fatness of the 37 men of college age (19-25) was notably less than that of 66 men aged 45-55. As estimated by body specific gravity, the proportion of the body weight attributed to fat was, on the average, 21.0 per cent for the older men and only 9.8 per cent for the college men; and the thickness of skinfolds of the abdomen, chest, and back was likewise approximately twice as great in the older men.

Prevalence and Distribution

Fundamental to the public health approach is the determination of the prevalence of ill health and the identification of the population groups showing high or low experience rates for the disease in question. Since such information is basic to the formulation of control measures, our ignorance in this regard with respect to obesity and overweight is distressing. Much quoted is the estimate, based on examinations for life insurance, that at least one fifth of our population aged 30 or more (about 15 million), are 10 per cent above their ideal weight, and that about 5 million of these weigh 20 per cent or more above the ideal⁽⁹⁾.

I will quote a few examples of informa-

tion regarding a few subgroups within the population: In a nutrition survey in a rural county of central Tennessee, 17 per cent of 407 white adults and the same proportion of 183 Negro adults were overweight according to a clinical estimation of the amount of subcutaneous fat⁽¹⁰⁾. The rate for males of both races was 5 to 6 per cent, while that for females was 26 to 29 per cent. Two studies in North Carolina also concern the frequency of overweight in the rural south. In Wayne County in 1942-1943, 20 per cent of both white and colored adults were found to be 20 pounds or more overweight⁽¹¹⁾, while in Alamance County the proportions were 16.4 per cent for white and 19 per cent for colored adults⁽¹²⁾.

Some 1,500 visitors to patients in the wards of the Bellevue Hospital in New York were observed by Wilens⁽¹³⁾, who estimated that 25 per cent of the middle aged and elderly men and 60 per cent of the women in the same age category were frankly obese. In the course of a nutrition survey in Groton Township, New York, it was found that 28 per cent of 640 persons 10 to 79 years of age were 10 per cent or more overweight⁽¹⁴⁾. Multiphasic screening of a sample of 235,000 adults in the Atlanta area disclosed that 7 per cent of this population was 25 per cent or more overweight⁽¹⁵⁾. Unfortunately, the article does not give separate rates according to age, sex, and race. A study of the longshoremen of the San Francisco Bay area yielded some interesting figures regarding overweight⁽¹⁶⁾. These men were relatively old as compared with the average of employed men in the area; 57 per cent were between 45 and 64, for a median age of 49. Almost 70 per cent of the men tested were cargo handlers engaged in heavy and often dangerous manual labor. Nine per cent of 3,992 men examined were 40 per cent or more overweight, and 34 per cent were 20 per cent or more too heavy. These figures are less extreme, however, when it is noted that according to the table of ideal weights for men⁽⁵⁾, the normal weight for a man 5 feet 9 inches tall would be 155 pounds, while 20 and 40 per cent overweight would be represented by 186 and 217 pounds. Overweight is usually reported to be less frequent among younger persons. Examination of 150,000 youths who sought employment in N.Y.A. work projects showed that 5 per cent were 25 per cent or more heavier than

average for their age, sex, and height⁽¹⁷⁾.

If, as public health workers, we are seriously resolved to undertake a program for the control of obesity or overweight, one of our first tasks will be to engage in systematic surveys which will define the extent of the problem and pinpoint the groups most affected. Such studies will require the use of standardized techniques for the diagnosis of obesity and overweight.

Mortality and Morbidity

Probably all who are interested in public health are familiar with the studies of insured men and women which have contributed so much to our awareness of the increased burden of mortality and morbidity that overweight imposes^(9,18). Our attention tends to focus upon the relationships between overweight and the cardiovascular diseases, since the latter are a principal cause of death among adults in the United States.

It should be noted that the insurance statistics relating obesity to mortality exclude from consideration any overweight persons with additional impairments which would entail extra premiums or rejection for life insurance⁽⁹⁾. Two studies in which the importance of these additional impairments may be assessed are available. Levy and co-workers⁽⁴⁾ sought to establish criteria for recognizing those candidates for commissions as Army officers who would be poor risks from the standpoint of circulatory and renal diseases. A study of the medical records of 22,741 Army officers showed that overweight, transient hypertension, or transient tachycardia, each by itself increased the probability of sustained hypertension and of cardiovascular-renal disease. The presence of two of these abnormalities was of greater prognostic significance than any one alone; and when all three were found, the probability of the later development of sustained hypertension was 12 times as great as in controls; and of subsequent retirement with cardiovascular disease, 4 times that of controls.

Wilens studied the relationship between obesity and atherosclerosis in 1,250 autopsies at the Bellevue Hospital in New York⁽¹³⁾, and found that advanced atherosclerosis was about twice as common in obese cadavers as in the poorly nourished. Since there is reason to believe that many of these persons

had lost weight before death, Wilens stated that his study would tend to underestimate the relationship between obesity and atherosclerosis. In regard to other predisposing factors, obesity appeared to be less important than advancing age or hypertension in promoting the development of atherosclerosis.

More than half the deaths from heart disease in men are attributable to coronary atherosclerosis, and a number of investigators have studied the distribution of body weight in persons who have suffered from coronary thrombosis⁽²⁰⁾. Their findings are not uniform, and in some cases the methods used for evaluating the body weights are open to objection. It is clear, however, that while persons of all ages suffering from coronary thrombosis may possibly show a disproportionate number in the overweight class, the majority of sufferers have normal weight or less. One must realize in this regard that cardiovascular disease may be more common in obese or overweight persons even though obesity is not unduly prominent in sufferers from these diseases.

These considerations all point to the conclusion that obesity or overweight may well contribute to the development of morbid processes, while other factors are likewise of undoubted etiologic importance. Our attention should be directed toward the eradication of these other causes, as well as toward weight reduction and the prevention of obesity, if our efforts to improve the health of adults are to bear full fruit.

In a provocative editorial⁽¹⁾ Keys has raised the question of whether the total elimination of overweight in this country would result in much of a decline in our death rates for adults. A final answer is difficult to supply in the absence of more complete statistical information regarding the prevalence of obesity and overweight and the relation of either or both to mortality. Keys⁽²¹⁾ reports some difficulties in generalizing on the basis of the experience of the life insurance companies which I feel sure are shared by many others. A large part of the answer to his question would appear to depend upon the prevalence in this country of obesity or overweight sufficiently marked to entail excess mortality. Even though the mortality of men and women 30-50 pounds overweight may be, say, one and one-half times that of persons of normal weight, if they compose only a small

fraction, say 10 per cent, of our total adult population, their effect on the death rates for adults cannot be very large.

Although we are not in a position to promise a spectacular decrease in mortality by an efficient program of weight control, we can be quite certain that many lives will be prolonged and a great deal of ill health avoided. Obesity appears to be a contributing factor in a number of morbid processes. To the extent that they can be controlled or prevented, obesity and overweight deserve serious attention in public health programs.

Prevention or Treatment

The public health physician should pause to consider that reduction clinics are means of treating a chronic morbid state which might better have been prevented. Experience with other diseases has amply demonstrated that it is less expensive and more rewarding to engage in a program of prevention rather than of mass treatment. If our efforts are to take this direction, we must make further careful studies of obesity. We need to identify the most susceptible groups, the primary and contributing causes, the most frequent ages of onset, and to become more familiar with the natural course of the disease. Some of this information is available at the present time, but there are large gaps in our knowledge which call for further intense study.

Hereditary and cultural factors appear to play a role in the etiology and pathogenesis of obesity, and psychogenic stresses, personality, and interpersonal relations are also important. Space does not permit a review of our incomplete knowledge of the mechanisms controlling appetite or of the metabolic theories which have been advanced to explain the cause of overeating. More research is needed, and future studies should concentrate on subjects during the stage of dynamic weight gain. Statistical information regarding the frequency of obesity and overweight in different population groups would be of material assistance in selecting promising areas for study. Investigations should be carried out in several areas, since it seems probable that obesity has many causes, and the etiologic components may vary from group to group.

A thumbnail sketch of the course of the disease would include the following points: Its dynamic phase is marked by the symptoms of overeating and rapid accumulation

of body fat, but after a certain length of time the active process subsides and the individual returns to caloric balance. The disease is now static; the patient is overweight and obese, and the equilibrium between appetite and body weight is stubbornly maintained. More than one period of dynamic weight gain may occur in a given case. Attempts to reduce are usually short lived, and in most cases are followed by a more or less intense dynamic phase which restores the subject to his former degree of obesity. There is good reason to believe that we are dealing with a chronic disease, and that our treatment succeeds only to the extent of converting an obese patient into one potentially obese and requiring continued medical supervision. This may not be the invariable rule; a few persons seem to "learn their lesson" in the first period of treatment and succeed in avoiding obesity during the rest of their lives. I am afraid that this is rather the exception, but I hasten to add that there are no figures to serve as a guide, and a careful study of the therapeutic failures and successes might be most rewarding.

The majority of those attending our obesity clinics are sufferers of long duration. They are in the static phase of obesity, and the dynamic phase which initiated their disease occurred many years ago. It might be rewarding to direct more of our effort towards the treatment of obesity of very recent origin. Etiologic factors could be identified more readily in this group, and we would less often be attempting to modify long continued and fixed habits of life. If this group of recent sufferers is to be treated, it will be necessary to employ procedures for case-finding somewhat similar to those used in programs for the control of tuberculosis and the venereal diseases. Efforts to prevent obesity should be directed towards young adults in the population groups most subject to the disease.

Therapeutic Regimens

The fundamental and indispensable tool in the treatment and prevention of obesity is reduction of the caloric intake through diet. In order to make this regimen more satisfying and acceptable, different workers have varied the relative amounts of carbohydrate, protein and fat. Low calorie diets relatively low in fat were the accepted rule until recently. Now regimens are more

varied. Pennington⁽²²⁾ restricts carbohydrate and salt narrowly, but allows protein and fat at will. On the other hand, Dole and co-workers⁽²³⁾ limit the protein intake to 35 Gm. a day, but provide their subjects with a surplus of carbohydrate and fat. Those who prefer the middle of the road will probably employ the calorically restricted, high protein, moderate fat, and low carbohydrate diet of Ohlson⁽²⁴⁾ and Young⁽²⁵⁾. This regimen requires less revision of meal plans than others and appears to allay hunger and prevent fatigue and weakness. Since obesity is a chronic disease, the sufferer will need to restrict his food intake even after he has lost weight. Because of this, the diet should be moderate and permit the closest possible approach to customary meal patterns. Our aim is to educate both the patient and his appetite, and this process takes time.

It is usually easier to provide competent dietetic instruction than it is to gain acceptance of the treatment by the obese subject. Here, motivation is a matter of primary importance. Unless he is convinced that it is important, our patient will seldom lose much weight and will surely regress. In an unknown but possibly significant proportion of obese persons, overweight is associated with psychiatric difficulties and personality traits which seriously interfere with therapy. It is apparent that these subjects will require the skills of the expert in mental health.

It is important to note that attention to the customary three meals a day is not enough. Most successful reducing regimens impose on the patient a new daily routine which conflicts with his habitual behavior in many ways. He may be required to rise early and take a walk before breakfast, to divide his food equally between his three meals, and to avoid eating between meals even though appetite and social custom almost require this practice. He may be asked to give up salt and tasty foods, to avoid alcohol, to refrain from taking the very comestibles which appeal to him most. At parties, receptions, on social calls, during the coffee break at the office, before the television set, in the movies, and at the ball game he abstains while surrounded by a crowd of voracious nibblers, chewers, and drinkers. It is not surprising that treatment is most successful when it is individualized, sympathetic, patient, and when there is a large

element of transference between the therapist and the patient. Nor is it remarkable that only the highly motivated patient succeeds.

Summary

Obesity is one of the major health problems facing our adult population, and its control will call for our best and most persistent efforts. We must learn a great deal more about its prevalence and distribution, its causes and predisposing factors, the reasons for success or failure in treatment, and we should begin to devote more attention to prevention and to the treatment of early cases. It has been emphasized that our obese patients must be highly motivated if reduction is to succeed and be permanent. It can equally well be said that the health professions must be adequately motivated before significant results can be obtained in the control of obesity.

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HYPERTELORISM

A Report of Two Cases

MICHAEL J. KEITH, M.B., B.S., (London)*
and

WILLIAM B. MACOMBER, M.A.

ASHEVILLE

Hypertelorism is an easily recognized, but comparatively rare disorder of cranial structure. It was first described by Greig⁽¹⁾ of Edinburgh, who called attention to this previously undifferentiated cranial deformity in 1924. Up until 1938, 42 cases had been reported. Since that time comparatively few cases have been added to the literature. In this paper we wish to report 2 additional cases, and a possible third.

Hypertelorism has been classified by Reilly⁽²⁾ according to four patterns: (1) A typical facies and familial tendencies, without mental defect; (2) typical facies and mental defect; (3) typical facies only; (4) typical facies and questionable family history, with beginning mental deficiency.

The condition is manifested clinically by an excessive spacing between the medial borders of the orbits. The nose is frequently broadened and flattened, with an uplifted tip. Radiologically, an abnormality of the sphenoid bone consisting of a great overgrowth of the lesser wings and comparative smallness of the greater wings is noted. It has been suggested that the deformity is the result of disturbances in the development of the cartilaginous part of the sphenoid bone, which is ossified at an earlier age than normal. However, other authorities have suggested an endocrine dysfunction, with special reference to the pituitary gland, but

From The Asheville and Buncombe County Mental Hygiene Clinic, Asheville, North Carolina.

*Instructor in Psychiatry, Duke University School of Medicine.



Figure 1



Figure 2

no evidence for this hypothesis has been satisfactorily put forward.

Case Reports

Case 1

A 7 year old girl was referred to this clinic because of difficulty in school. She was sent to us with a tentative diagnosis of Mongolism. When first seen by us on January 23, 1954, this child presented a quite distinctive appearance (see figs. 1 and 2). She had widely spaced eyes, which appeared at first sight to be proptosed. Protruding over her forehead were strands of thick, coarse hair.

On examination no gross neurologic abnormalities were noted, although the father complained that she had difficulty in walking up stairs; this observation could not be confirmed in our examination. It was noted, however, that she had difficulty with fine movements, and hopping on her right foot was impaired. She was right-handed.

The significant findings were confined to her head and neck. The most obvious abnormality was the wide divergence of the eyes, which resulted in monocular vision. She was unable to fix her eyes during an ophthalmoscopic examination, which revealed patchy, streaky depigmentation leading out from the optic discs. The base of the nose was extremely broad, the forehead somewhat protuberant. The mouth had many carious teeth and a high, arched palate. Her tongue was small and delicately pointed.

A Wechsler Intelligence Scale for Children was performed by one of us (W.B.M.), and an I. Q. of 54 was found, with a verbal scale of 66 and a performance scale of 50.

This represented an optimally high grade defect, but functioning on a slightly lower level due to interference of possible organic factors.

The family history disclosed that this child was the third born of 5 children. The first child had been a boy, born when the mother was 20. He was normal. The second child, a female, was delivered two months prematurely when the mother was 22. This child died 15 minutes after birth. The mother was not allowed to see the child because of a cranial deformity. Investigation of the hospital records, however, revealed that this child was a monster with a cranial deformity, no diagnosis having been made. Following this delivery the mother had an operation for an ovarian cyst. The patient in the present case was born four years later, and weighed 7½ pounds. The delivery was difficult and the child was not expected to live. She was somewhat slow in passing her normal landmarks and presented the picture described above.

Three years later the mother had another male child, who was normal. Two years after that she gave birth to her youngest child, a girl, who is the patient described in case 2.

Case 2

This child was seen in the clinic at the age of 2 years. She was suffering from obvious hypertelorism (see fig. 3). A physical examination disclosed widely divergent eyes, which showed signs of chronic infection, and coarse-textured hair. No other abnormalities were noted. She had passed all her normal



Figure 3

landmarks, and did not seem to be defective upon observation.

In summary, these two children had hypertelorism and both of them had abnormal hair texture. The older child had some depigmentation of the fundus. The younger child's fundi were not examined.

Comment

It is interesting to review these 2 cases and the possibility of the third in the deceased sister in order to question the validity of Reilly's classification. As far as could be determined, there were no other cases in the family, although a paternal niece had been a mental defective from birth. She, however, had no cranial deformity. In these 2 cases we have one patient manifesting the typical facies and mental defect, and one the typical facies only. The abnormality of the fundus and the coarse hair fit in with many of the congenital defects recorded in association with hypertelorism by other authors.

In this family one sees a strong tendency among the female members to this congenital defect, with none appearing in the males. This deformity has not been reported heretofore to have a particular sex incidence. Whether or not this is coincidental or whether there is an actual linkage with sex is not determined.

Summary

A brief discussion of hypertelorism is presented. Two cases in sisters, and a possible third in yet another sister have been reported. The possibility of sex as a factor

in the appearance of this defect has been raised.

The authors wish to thank Dr. R. L. Craig of Highland Hospital for his advice and opinion upon the neurologic status of the patients.

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EARLY NORTH CAROLINA MEDICINE THE MEDICAL JOURNAL OF NORTH CAROLINA, 1856-1861

DOROTHY LONG, M.A., B.S.L.S.

Not quite a hundred years ago, in August of 1858, the *Medical Journal of North Carolina*, first of the journals to be published by the State Medical Society, was born after a long and difficult labor, to enjoy a brief and precarious existence. It appeared at a time when the troubled political scene was rapidly growing worse, and it is not surprising that the infant journal survived the outbreak of the Civil War by only a few months, its last issue being published in September, 1861.

The first definite step toward the establishment of a medical journal was made at the meeting of the society in 1856, when Dr. Newsom J. Pittman moved that the president appoint a committee to consider the expediency of such a venture. This committee reported that a monthly journal of as much as 128 pages per issue could be published for about \$800 a year, and that a "modest but reasonable" salary for the editor would be \$400. Since such a publication seemed feasible, the committee suggested that a prospectus be issued to the doctors of the state, and that the necessary number of subscribers be obtained⁽¹⁾.

In April, 1857, at the next annual meeting of the society, Dr. S. S. Satchwell, secretary, reported that he had issued such a prospectus, but that there were not enough subscribers to finance the publication. After further consideration, the committee urged the members of the society to continue their efforts, as a journal would serve to "unite and strengthen the regular members of the pro-

⁽¹⁾Reference Librarian, Division of Health Affairs, University of North Carolina, North Carolina Memorial Hospital, Chapel Hill, North Carolina.

fession, to develop the slumbering medical talent of the state, by causing deeper research, and closer and more attentive observation, and would give a higher character, if properly gotten up and conducted, to the profession of the state at home and abroad."⁽²⁾ In 1858, at the ninth annual meeting, enough individual donations were secured to make the journal's first year possible, though it was issued somewhat irregularly. Its first editor was Edward Warren of Edenton, one of the most colorful figures among the doctors of that time.

1858-1861

The initial number of the journal began with an account by Dr. William R. King of the diseases of Franklin County, the beginning of a series of papers on the medical geography of the state. In addition to original articles, it contained bibliographic notices and reviews, selections from other journals, and an editorial devoted largely to the need for a medical journal in North Carolina and the editor's hopes for its success and usefulness. Later issues followed this same general pattern, and, though Dr. Warren occasionally complained of a lack of material, he seems to have received a reasonably good supply of original papers from doctors throughout the state.

That he himself kept well informed on current medical literature and events is shown by such items as translations from the works of Bernard and Brown-Sequard, a review of the first American edition of Gray's *Anatomy*,⁽³⁾ and a report from *Lancet* on the medical use of hypnosis in France⁽⁴⁾. In October, 1858, Dr. Warren reviewed J. Marion Sims's *Silver Sutures in Surgery*⁽⁵⁾. Though he admitted the importance of the work, he was critical in some respects, and he commented on the egotism of the author—a trait from which the reviewer was not entirely free. In the same issue was a translation from Bernard, "On variations of color in the venous blood of glandular organs in connexion with their state of activity or repose."⁽⁶⁾ Apparently Warren was particularly interested in Bernard's work, as the February, 1859, issue contained another translation, "On the influence of the two orders of nerves which produce variations of color in the venous blood of glandular organs,"⁽⁷⁾ and there were still others in later numbers.

In 1860, when Warren went to Baltimore to teach in the University of Maryland medical school, the editorship was taken over by Dr. Charles E. Johnson, of Raleigh, and Dr. S. S. Satchwell, who was at that time studying in Paris. Dr. Johnson commented that they had "commenced our labors under the most discouraging circumstances and in perilous times."⁽⁸⁾ The journal continued in much the same pattern as before, with the exception of letters from Dr. Satchwell describing his studies in Paris. An increasing emphasis on military medicine is noticeable in successive issues.

In the autumn of 1861, with its editors in active military service, the young journal quietly expired. In 1866, when the medical society resumed its meetings after the conclusion of the Civil War, a committee appointed to report on the journal found that its records and accounts had been lost during the occupation of Raleigh, but that the society owed Dr. Johnson about \$300. The members of the committee added that under existing circumstances, they did not recommend any attempt to revive the publication.⁽⁹⁾

Edward Warren

All three editors of the *Medical Journal of North Carolina* were leaders in their profession, but Edward Warren was probably more widely known than either of his successors. His life has been the subject of several articles, including an excellent one by Dr. Hubert Royster⁽¹⁰⁾, and Warren's autobiography, *A Doctor's Experiences In Three Continents*, written in the form of letters to Dr. John Morris of Baltimore, although it reveals a somewhat exaggerated sense of his own importance, is nevertheless an entertaining record of an eventful career. His father, William C. Warren, was also a physician, and Edward Warren interrupted his studies at the University of Virginia for a year at home as a student of his father. Following his graduation from Virginia he went to Jefferson Medical College, in Philadelphia, receiving his degree there in 1851.

After three years of practice with his father, Edward Warren went to Paris in 1854 for a year of further study. While there, he acted as correspondent for the *American Journal of the Medical Sciences*. In 1856, with an essay on "The influence of pregnancy on the development of tuberculosis," he won

the Fiske prize given by the Rhode Island Medical Society. In 1860, while he was professor of materia medica and therapeutics at the University of Maryland, Dr. Warren started the *Baltimore Journal of Medicine*. Shortly after the outbreak of the war, he returned to North Carolina, and held several positions in the Confederate army, including that of Surgeon General of the state. In 1863 he published a manual, *An Epitome of Practical Surgery for Field and Hospital*.

When the war ended, Warren returned to Baltimore, where he taught first at the Washington University medical school and later at the College of Physicians and Surgeons of Baltimore, which he helped to establish. Continuing his interest in medical journalism, he began the *Medical Bulletin* for the Medical and Chirurgical Faculty of the State of Maryland. A few years later, personal unpopularity following his testimony as an expert witness in a murder trial and grief at the loss of a son combined to influence his leaving Baltimore, and in 1874 he went to Egypt as chief surgeon on the general staff of the Khedive. Dr. Warren had a brief but adventurous experience in Egypt, during which a successful operation on the minister of war for the relief of hernia secured for him a promotion and the title of Bey. In 1875 he went to Paris to be treated for an eye condition, established a successful practice, and remained there until his death in 1893. Dr. Warren received decorations from a number of foreign governments and several honorary degrees, including one from the University of North Carolina. He was quite proud of his many honors, though he said once that he was tired of "chasing an empty shadow around the world."⁽¹¹⁾

Charles Earl Johnson

Dr. Charles Earl Johnson, who edited the journal in 1861, was also born near Edenton, and graduated at the University of Virginia. He began the study of medicine as a pupil of Dr. Matthias Sawyer, and then went to the University of Pennsylvania, graduating there in 1834. Dr. Johnson began practice in Edenton, but moved to Raleigh in 1845 and spent most of his active life there. He was one of the founders of the State Medical Society, and was its president in 1856 and 1857. In 1861-1862 he served as Surgeon General of the state troops. Though he wrote on a

number of different subjects, he was especially interested in mental illness, and probably his most important publication was the treatise, *The Question of Insanity and Its Medico-Legal Relations*, published in Raleigh in 1869. The memorial to Dr. Johnson in the medical society's *Transactions* indicates that he was an unusually successful and beloved physician⁽¹²⁾.

Solomon Sampson Satchwell

Co-editor with Dr. Johnson was Dr. Solomon Sampson Satchwell. Following his graduation from Wake Forest College, Dr. Satchwell studied for a while with Dr. John Norcom, and then went to the University of New York, graduating from its medical department in 1850, but remaining in New York for another year and a half of study. Dr. Satchwell practiced in North Carolina until 1860, and then studied in Paris for a year. He returned to serve as a Confederate Surgeon, spending most of his time in the hospital at Wilson. Dr. Satchwell was president of the medical society in 1868, and was influential in organizing the state board of health. He died of typhoid fever in 1892, in an epidemic during which he is said to have treated patients after he was himself seriously ill⁽¹³⁾.

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Donnatal Is Subject At Study

The effect of Donnatal (Robins) in functional disturbances of the gastrointestinal tract is the subject of a study directed by Dr. Lionel Marks, Toronto, Canada. One hundred cases of gastric spasm, duodenal spasm, spastic colon and irritable bowel are under observation. Patients are x-rayed, treated for three weeks with Donnatal, then x-rayed again by barium enema to determine whether the previous radiologic picture of spasm has changed. The study, to last six months to one year, is being made under a grant by the A. H. Robbins Co., Inc., Richmond, Virginia.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
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obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
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JULY, 1955

MEDICAL PRACTICES

Early in 1954 a Special Committee on Medical Practices, with Dr. Stanley R. Truman as chairman, was appointed by the Board of Trustees of the American Medical Association "to study the basic causes of fee splitting and other unethical practices that have been the subject of adverse publicity for the profession." This committee submitted a 72-page report, which was condensed by the Board in a statement published in the Organization Section of the *Journal of the American Medical Association* for May 7 (pages 49-50). The House of Delegates at Atlantic City, however, voted to have a copy of the full report sent to every delegate before the next meeting in Boston before taking action.

The recommendations of the committee

are important enough to justify being presented editorially in this JOURNAL. No doubt our delegates will welcome expressions of opinion from members of the State Society.

The recommendations were preceded by the observation that "the committee found general agreement among doctors that there are greater financial rewards for the practice of surgery than for the practice of medicine. This discrepancy results from a low public evaluation of medical and diagnostic services as compared to high public evaluation of surgery. Recognizing this inequity, some surgeons willingly split their fees with other physicians in an effort to correct personally the resulting economic injustice . . . the restrictions of some surgical specialty boards work an economic hardship on the young surgeon. He has little or no referred work and is permitted to do no general practice . . . Arbitrary hospital restrictions on general practitioners, where they occur, create another set of economic hardships and frank hostility, particularly among those with special training in surgery that they are not permitted to utilize."

A four-point program was then recommended:

1. That a subcommittee of the Committee on Medical Practices be created to begin work on a relative value scale for the whole of the practice of medicine and surgery . . . The scale would be an indication for both doctors and the public of the proper relation between fees for various medical and surgical services. Its existence would be of interest to underwriters of health insurance and to all organizations, both medical and nonmedical, that are concerned with fee schedules. As it proved its usefulness and as more and more people became aware of it, the economic inequities that foster fee splitting would probably decrease.

2. That a program of public education on the value of diagnostic and medical work be fostered by the Department of Public Relations of the American Medical Association to increase public appreciation of nonsurgical work.

3. That the American Medical Association communicate to the specialty boards the findings of this survey, encouraging the boards to reappraise the value of the regulations, restricting the practice of those seeking or holding board certificates (with consideration of the removal of the restrictions in keeping with good medical practice).

4. That the American Medical Association continue to discourage arbitrary restrictions by hospitals against general practitioners as a group.

It is, of course, difficult to take an objective view of the problems facing the committee, and to escape being influenced by one's own interest. Even the surgeons, however, will admit that they are paid more

than are medical men for comparable preparation, diagnostic acumen, and responsibility. The "underwriters of health insurance and . . . all organizations . . . concerned with health insurance" offer the avenues of approach to a more equitable distribution of fees.

It is easy to understand that the proportion of surgical operations in a given number of policy holders in a year is far easier to calculate than the amount of medical illness to be expected. The very sensible suggestion has been offered by a surgeon that instead of charging for visits, medical men should, like the surgeons, fix the fees for various conditions that might be called medical emergencies. Examples that readily occur are myocardial infarction, massive gastrointestinal bleeding, diabetic coma, and cerebrovascular accidents.

Certainly the training required to become an internist is as long and arduous as that required to become a surgeon; the responsibility is just as great; and the demands made by the patient's relatives are greater.

The committee has a Herculean task before it, but its members are strong men. Let us hope and pray that more and more all doctors will look upon their profession as a great team, with every member determined to do what is best for the welfare of the patient.

* * *

GENERAL PRACTICE PRIOR TO SPECIALIZATION

For some time the feeling has grown that a medical school graduate who desires to be certified as a specialist should have, in addition to the training required in his chosen field, one or more years of experience in general practice. As a result of resolutions introduced in the House of Delegates in 1953, a special committee was appointed to study this question. The committee sent a questionnaire to 9,600 certified specialists. More than 90 per cent of those who had had experience in general practice prior to specialization, and 40 per cent of those who had not had such experience "considered it valuable training and recommended a year or two of such experience prior to specialty certification for all young doctors."

As a result of this study, the committee was convinced that at least a year of general practice would be very helpful to every

specialist. It also recognized the obstacles to be overcome, but felt that the advantages were greater than the disadvantages. It recommended, therefore, that the Board of Trustees of the American Medical Association be instructed to enlarge the committee to 11 members and to provide it financial support for further study.

The first two recommendations of the committee showed that it really meant business:

First, that the Board of Trustees be instructed to revise the Committee on General Practice Prior to Specialization to become an 11-member committee, to include 3 members of the Board of Trustees, 2 of the Council on Medical Education and Hospitals, 2 of the Council on Medical Service, and 4 members of the House of Delegates, 2 of whom are general practitioners, and none of the 11 members to be deans or full-time professors in medical schools or officers or directors of any specialty board;

Second, that this committee be made responsible to the Board of Trustees and make periodic reports to it and this House.

The Reference Committee on Medical Education and Hospitals approved the report and referred it to the Board of Trustees for its consideration; so further developments may be expected.

Comments, whether pro or con, will be welcome in this JOURNAL, and will be passed on to the Board of Trustees or to the enlarged committee for consideration.

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PHYSICIANS URGED TO REPORT USE OF SALK VACCINE

In this issue, under "Committees and Organizations," appears the suggested form for use in reporting vaccinations against poliomyelitis. Physicians will readily appreciate the importance of complying with the request of the State Advisory Committee on Poliomyelitis Vaccine to report individual experience with the Salk vaccine. Only on the basis of accurate follow-up data can the effectiveness of the preparation be evaluated and the decision to undertake mass inoculation be made.

The NORTH CAROLINA MEDICAL JOURNAL joins the committee in urging doctors to fill out the blanks promptly and accurately, in duplicate, returning one copy to the county health officer and keeping the other for their personal files. By so doing they may have a part in determining the ultimate effectiveness of the vaccine, which at present appears to offer the best hope of combatting poliomyelitis.

MEDICINE'S CHANGING FACE IN BRITAIN

In his presidential address to the Edinburgh Obstetrical Society⁽¹⁾ Dr. Clifford Kennedy questions the layman's "belief that he lives in an era when all is well with medicine." He asks, "Why so often is the medical father today relieved when his son . . . chooses a different career?" Dr. Kennedy says that he speaks only from the specialist's viewpoint, and "would not presume to speak of the worries which attend the general practitioner." He lists four factors in the change: the lengthened period of undergraduate training; the prolonged course of training required to become qualified as a specialist—estimated as some 15 years from the time he started medicine; the division of specialists "into four groups according to whether we have one of three grades of merit award, or none at all," and finally, the changed relationship between doctor and patient, and between patient and hospital. "Why," he asks, "Do we find headlines in the daily press featuring with ever-increasing frequency the actions brought by patients against the surgeon or against the hospital?"

Dr. Kennedy gives three main reasons for the increasing number of such claims:

1. "Free legal aid enables the individual to bring an action without risk of financial loss. If he loses his action, the expense is borne by the State; if he wins, he stands to gain."
2. There is the idea, all too prevalent, that nowadays the government rather than the doctor is being sued, for after all the doctor is merely the servant.
3. "In this present age, and in every walk of life, there is prevalent a desire to get something for nothing. . . . Such an outlook is being bred and fostered by the ideas behind the Welfare State."

Dr. S. Cochrane Shanks, president of the Medical Defense Union, stated that the number of claims for alleged medical negligence submitted to them in 1953 had increased by 80 per cent as compared with 1947. Compensation payments made by National Health Hospital Authorities, largely resulting from claims for damages by patients, have risen from 7560 pounds in the period July, 1948, to March, 1949, to 152,590 pounds in 1953.

In concluding his address, Dr. Kennedy

asks whether, "with the enormous cost to the country which this new service entails, the patient has benefited in the essentials of treatment; whether the vast administrative wheel, which often grinds so slowly, might be made smaller and yet more effective; whether the endless committees, which force the public-spirited to spend almost as much time in the train as in the hospital, are so necessary; and whether great power and influence vested in the hands of a few satisfies our democratic ideals."

1. Kennedy, C.: *The Changing Face of Medicine*, British M. J. (April 30) 1955, p. 1045.

* * *

DUKE'S SILVER ANNIVERSARY

Twenty-five years ago this month the four-year School of Medicine of Duke University opened its doors. Within this comparatively short time in the life of an institution, Duke's influence in North Carolina and in the nation has been tremendous. It has added hundreds of graduates to the medical profession; it has contributed an amazing amount of high-grade research, and it has given high grade medical care to thousands of patients.

Dr. Edward L. Turner, secretary of the American Medical Association Council on Medical Education and Hospitals, in the principal address at the twenty-fifth anniversary "appreciation ceremony," paid high tribute to the "imaginative leadership" Duke Medical School has had from the beginning, which enables it now to celebrate "a silver anniversary of achievement justifying both youthful and mature pride."

Dr. W. C. Davison, who has been dean of the Medical School from the beginning, deserves great praise for the large place the school has made for itself. Not the least of his many fine qualifications for the job is his ability to select his faculty members and to inspire them to work with him and their colleagues as a great team.

Generally, patients fall into four groups: (1) the old patient with the old disease; (2) the old patient with the new disease; (3) the new patient with the old disease; and (4) the new patient with the new disease. In the first two groups it is so easy to be lulled into a sense of false security. We know all about the patient, but there is grave risk of missing some disease that has been present all the time or has developed insidiously and masked by the familiar cough, backache, or what have you. Infinite care to assure that no sign or symptom is missed is all important.—Editorial: *Diagnosis in General Practice*, Canad. M.A.J. 69:444 (October) 1953.

Committees and Organizations

ADVISORY COMMITTEE TO THE NORTH
CAROLINA STATE BOARD OF
WELFARE

THE PHYSICIAN AND ADOPTIONS

In adoption, as in many other areas of life, the physician is often in a privileged relationship and needs therefore to be thoroughly familiar with applicable state laws. Couples wishing to adopt a child may seek the help of a physician in securing a child. Many an unmarried mother also turns to a physician to help place her child.

Physicians can be of help in both these situations through counsel and guidance drawn from their experience. However, every physician should have a clear understanding of the limits set by state law upon the participation by any person, the physician included, in the direct placement of a child for adoption with non-relatives.

No one, physician or lay person, is permitted under state law to participate in the direct placement of a child in a home with non-related adoptive parents. Neither is it permissible under the law to separate a child under six months of age from its mother except to persons related to the child.

Under the North Carolina law only the 100 county public welfare departments and the four private child-placing agencies licensed by the State Board of Public Welfare are authorized to handle adoptions. These agencies serve as the media through which couples wishing to adopt a child are helped to find a child suited to their situation and needs. Careful studies are con-

ducted, both of the adoptive couple and of the child available for adoption, to assure a wise placement. Physical and psychologic examinations are given the child and social studies are made of the adoptive home.

Parentage of the child is kept confidential in the adoptive process in agency placements handled by public and private social agencies. This assures the fact that the mother cannot come into the picture in later years and do irreparable emotional damage to the child and to others who have come to love the child as though it were a natural child in the family.

It becomes, then, the course of wisdom and ethics for the physician to guide adoptive couples and unmarried mothers to the county department of public welfare or to one of the licensed child-placing agencies rather than to participate to any degree in a direct placement in violation of state laws. The physician can also aid by interpreting the wise provisions of this excellent adoption law to nurses, lawyers, and ministers, all of whom may otherwise find themselves drawn into participation in direct placements contrary to the law.

ALLYN B. CHOATE, M.D.
Chairman

NORTH CAROLINA STATE ADVISORY
COMMITTEE ON THE SALK POLIO-
MYELITIS VACCINE

The North Carolina State Advisory Committee on the Salk Poliomyelitis Vaccine wishes to call attention to the following form for the use of physicians in reporting individual poliomyelitis vaccination. Physicians are urged to fill out duplicate blanks (obtainable through the county health departments), one to be returned to the county health officer for statistical purposes, and the other to be kept by the physician.

NORTH CAROLINA
*Physicians Report of Poliomyelitis Vaccination

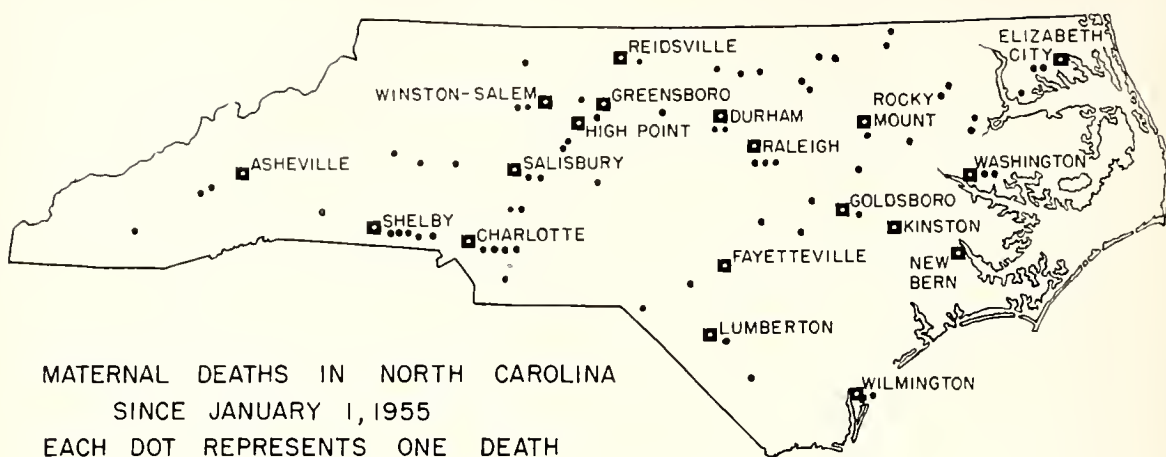
Name of Child: _____ Age: _____
(Last) (First) (Middle) (at last birthday)

Address: _____
(Number) (Street) (City or Town) (County)

Vaccination	Mo.	Day	Year	Vaccination Site	Manufacturer	Lot. No.	Remarks
First							
Second							
Third							

Physician _____ Address _____

*INSTRUCTIONS: Prepare in duplicate. Send original to County Health Officer.
Retain copy for office use.



BULLETIN BOARD

PRESIDENT'S MESSAGE

In this my first official message to my fellow members of the Medical Society of the State of North Carolina, I wish to express my grateful appreciation for your confidence in me and for the support of every member of the Society, upon which I am sure I can rely.

I agree with Elmer Hess, president of the American Medical Association, who in Atlantic City recently said, "Lightning strikes in funny places; I am living proof of this."

I accept the high honor conferred upon me with humility, but with a strong determination to serve you, and through you the best interest of the four and one-half million citizens in North Carolina, whose health and sometimes whose lives rests in our hands.

Your Society urgently needs the keen intellect, the boundless energy and enthusiasm, and the cooperation of every member. Every physician must be willing to work, to stoop down, pick up, and shoulder his load in support of his faith and belief in medicine.

As president-elect during the past year, and as president during the past two months, I have had the rewarding pleasure of discussing medicine not only with the leaders in our profession, but with leaders in other walks of life. These talks have always been informative and stimulating, though sometimes confusing. They have proved helpful in advancing and extending the science and art of medicine to all our citizens.

I have frequently been asked questions for which there are no easy answers. For example, just a few days ago I was asked to account for the many failures in medicine. My answer to this was another question: How does one account for the innumerable triumphs medicine has won for the benefit of mankind throughout the ages, and is still winning? Many still feel that medicine is not meeting its challenge. My answer to them is to ask how they would like to live in a community where there is no physician.

Medicine has not yet come of age. It still has much to contribute to the health and welfare of our fellow men. We can look forward with optimism and assurance to continued medical advances which will surpass those of the past.

The remaining potentialities of medicine require a look into the future. Two methods for doing this occur to me: One is the use of the crystal ball, which I am told requires considerable training, experience, and concentration. I decided on the other method—a process called extrapolation. If only slightly more accurate than the crystal ball, it is easier to use. It involves the projection of existing medical trends into the future, on the assumption that these trends will continue unchanged. If I am right in this assumption, it will not be long before the major causes of sickness, suffering, and death will be conquered or controlled through the unselfish efforts of the medical profession. Man-made accidents today stand second among all causes of death.

During my year of stewardship one of my chief objectives will be to bring to every member of our county societies (which are

actually the keystone of the American Medical Association) information about the important problems facing medicine and to solicit their help in solving these problems. The day is long past when a county society can be concerned merely with the scientific aspects of medicine. Interesting case reports by the members, or learned discussions by visiting professors of some new approach to an old problem which they themselves have actually not had time to use must be largely replaced on our programs by deliberate and voluntary discussions of the problems of organized medicine. The many other scientific symposiums, postgraduate courses, honor lectures, scientific journals, and the many meetings sponsored by our various specialty groups and by the North Carolina Academy of General Practice are entirely adequate for scientific advancement.

We in medicine must retain our leadership by giving all health agencies our full assistance, advice, cooperation, and participation. The health of the community as a whole should be the concern of those who care for the health of its individual members. To bring to the members of our county societies the many problems with which we are faced, and to gain their support in helping to solve these problems will be more effective than leaving them with our busy executive council and committees. Your officers, council, and committees need your good ideas.

As Dr. Hubert Porter has said: "Doctor, the medical profession is you; a burden shared by many is a light burden for all." To that I would add that "when public service ceases to be the chief function of our citizens and they would rather serve with their money than with their persons, the society, state and nation are not far from their fall."

To learn without studying, to be paid without working, to enjoy peace and security in medical practice without personal endeavor is to cheat both nature and reason. Inanimate nature has its parasites, but for a physician to be a parasite is to invite destruction.

Parasites in medicine become so for two reasons: (1) they seek safety and security without using their own faculties; and (2) they seek financial success without earning it. They resort to the old adage, "Let Joe do it." Like some civilizations, they become lazy and decide to live on the efforts of others.

They have finished their course in the progressive school of medicine. They no longer accept discipline, make an effort, or maintain the struggle for existence. Their motto becomes "To live on others; the medical profession owes me a living." One who could have been an independent individual now becomes a dependent individual.

Any new set of conditions which enables an animal to obtain food and safety easily leads, as a rule, to degeneration, just as healthy active men degenerate when suddenly possessed of fortune, or as Rome degenerated when possessed of the riches of the ancient world. There is danger that the medical profession may become so surfeited with pleasures and riches and so puffed with pride that it will fall as Rome did.

There has never been a time when so many have had so much and so many have had so little. One half of the world goes to bed hungry every night.

The sins of omission have penalties just as have the sins of commission. There is a penalty for not sowing just as there is a penalty for sowing thistles. Man loses character not only because of the evil he does, but because of the good he leaves undone.

No true success was ever enjoyed without sacrifice and effort. What costs nothing amounts to nothing.

Babies are not the only ones who like predigested food. Unfortunately, some physicians like it too.

Nature gives man corn, but he must plant it. God gives man a will, but man must make right choices.

There has never been found any better philosophy than this: "To put the cross at the center of civilization of the good, the true, and the beautiful, and then take up your cross daily and follow me."

Recently I attended the American Medical Association's annual meeting in Atlantic City. I am more than pleased with what I saw and heard there. Guess what impressed me most! Busy doctors, important, busy practitioners of medicine, leaders in their communities, just like you. These doctors were giving selflessly of their time and energy without stint or scruple. I watched them spend long hours in the House of Delegates meeting and in the numerous committees, struggling with thousands of

problems in order to advance medicine and keep you free. My experiences there gave me a vast and profound respect for organized medicine and its leadership.

JAMES P. ROUSSEAU, M.D.

COMING MEETINGS

State and Regional

New Hanover County Medical Symposium — Wrightsville Beach, August 19.

Symposium on "The Treatment of Poisonous Snakebite Wounds" sponsored by the Wyeth Pharmaceutical Company of Philadelphia, the Bowman Gray Medical Society, and the Bowman Gray chapter of the Student American Medical Association—Amphitheater, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, August 22, at 7:30 p.m.

Tenth District Medical Society Fall Symposium—Memorial Hospital Medical Library, Asheville, October 12.

North Carolina EENT Society and the South Carolina Society of Ophthalmology and Otolaryngology, combined meeting—Columbia, South Carolina, September 12-14.

Postgraduate courses

Duke University Postgraduate Medical Cruise—aboard the M. S. Stockholm, November 23 - December 5.

*Postgraduate course—Morganton, September 21-November 2.

*Postgraduate course—Asheville, September 22-November 3.

Three-day course in surgery—Chapel Hill, November 28-30.

Eight weeks' general program in general medicine—Chapel Hill, October 5-November 23.

First District postgraduate course—January 11-February 15.

Industrial Health Program—February 9 and 10.

Postgraduate course—Statesville, March 13-April 17.

Program in general medicine—Chapel Hill, week of March 5.

Eight weeks' program—Chapel Hill, February 15-April 11.

*No meeting the week of October 12 because of Tenth District Medical Society Symposium.

National

Public Relations Institute—Chicago, August 31 - September 1.

Mississippi Valley Medical Society, Twentieth Annual Meeting—St. Louis, Missouri, September 28 - 30.

American Medical Writers' Association—Twelfth Annual Meeting—St. Louis, Missouri, September 30.

New York Academy of Medicine, Twenty-eighth Annual Graduate Fortnight (Problems of Aging)—New York City, October 10 - 21.

American College of Gastroenterology—Chicago, October 27, 28, 29.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Duke University has just been awarded \$116,000 in U. S. Public Health Service grants for research work by 16 Duke scientists, it was learned recently.

The Duke investigators and their projects are: Dr. William L. Byrne, associate in biochemistry, interconversion of phosphates; Dr. George M. Margolis, associate professor of pathology, study of changes in liver disease; Dr. Albert Heyman, associate professor of medicine, and Dr. George J.

Baylin, professor of radiology, study of cerebral vascular disease; Dr. Joseph W. Beard, professor of surgery, avian leukosis virus; Dr. William G. Anlyan, assistant professor of surgery, search for specific gastric cancer-tissue antigen; Dr. R. Wayne Rundles, associate professor of medicine, serum proteins in blood cell malignancies.

Dr. Samuel P. Martin, associate professor of medicine, the role of enzyme systems in tuberculosis; Dr. Philip Handler, professor of biochemistry, nucleotide synthesis and sulfite oxidase; Dr. William J. deMaria, assistant professor of pediatrics, and Dr. Jerome S. Harris, professor of pediatrics, transfusion reaction in dogs; Dr. Goodall McChesney, associate professor of physiology, effect of cervicostellate ganglionectomy; Dr. Eliot H. Rodnick, professor of psychology, and Dr. Norman Garnezy, assistant professor of psychology, motivation and psychological deficits of schizophrenia; Dr. Norman Guttman, assistant professor of psychology, and Dr. Harry I. Kalish, visiting assistant professor of psychology, stimulus generalization and discrimination.

* * *

Banthine is the most effective of newly-developed drugs for treatment of stomach-ulcer, and hexamethonium (C-6) is best for high blood pressure, a team of Duke University surgeons reported in a scientific exhibit at the American Medical Association meeting held at Atlantic City in June.

Of the eight newest drugs used for treatment of ulcer, only three—Banthine, Pro-Banthine, and Contranul—are sufficiently effective in pill form to produce good results, Drs. Keith S. Grimson, Frank H. Longino, and Benjamin H. Flowe pointed out. Banthine, introduced in 1950, still produces the best results, they said.

The exhibit is based on studies of more than 300 patients during the last five years at Duke.

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Dr. Barnes Woodhall, professor of neurosurgery, addressed the American Neurological Association in Chicago on June 14. His subject was "Stilbamidine in the Treatment of Tic Douloureux."

* * *

Duke University has just been granted \$41,847 in American Cancer Society funds for support of research by five Duke scientists during 1955-1956.

In all, \$53,513 has been allocated in North Carolina, including \$11,666 for grants at Wake Forest College and the University of North Carolina, in addition to the \$41,847 at Duke. The \$53,513 total is the largest ever granted by the society in the state since the program was started 10 years ago.

Duke grants approved by the ACS Board of Directors upon recommendation of the Committee on Growth of the National Research Council are as follows:

Dr. Aubrey W. Naylor, associate professor of botany, for a study of the compound, maleic hydrazide, which has been found to prevent growth of some species of plants. Dr. Naylor is attempting to determine what processes are involved in the action of this chemical by testing its effect on plant enzymes and by studying known growth-promoting substances.

Dr. Joseph W. Beard, professor of surgery, for a project to determine the chemical constitution of a virus in fowl which is known to cause cancer-like disease.

Dr. R. Wayne Rundles, associate professor of medicine, for studies on abnormal proteins found in some cancer patients.

Dr. Seymour Korkes, associate professor of biochemistry, for work on reduction of constituents vital to cell growth through studies on the mechanisms by which certain enzymes react with these constituents.

Dr. Frank L. Engel, associate professor of medicine, for studies on how hormones influence the production of fat, growth and diabetes.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Dr. T. Franklin Williams, of the University of North Carolina School of Medicine, has been awarded a renewal of a postdoctoral fellowship by the Life Insurance Medical Research Fund, it was announced recently by Dr. Reece Berryhill, dean. The postdoctoral fellowship as approved by the Board of Directors of the Life Insurance Medical Research Fund will enable Dr. Williams to continue to obtain training experience in scientific research under the supervision of Dr. Lewis G. Welt, professor of medicine.

Dr. Williams has chosen as his field of study the excretion of water and electrolytes. This fellowship is one of several postdoctoral fellowships awarded by the Life Insurance Medical Research Fund to enable the holders, who are known as Life Insurance Medical Research Fellows, to become better qualified as scientific investigators through participation in actual research under expert guidance.

Dr. Williams came to the University last year and was appointed a fellow in the Department of Medicine. He graduated from the University of North Carolina in 1942 with a B.S. in chemistry, received his M.A. from Columbia University in 1943 and his M.D. from Harvard University in 1950. He is a native North Carolinian.

* * *

Dr. Nelson K. Ordway, professor of pediatrics, and Dr. Judson J. Van Wyk, assistant professor of pediatrics, recently presented scientific papers at a combined meeting of the American Pediatric Society, the British Pediatric Association, the Society for Pediatric Research, and the Canadian Pediatric Society. Dr. Ordway's paper entitled "Reversible Respiratory Depression in Salicylate Intoxication" was co-authored by Dr. Robert W. Winter, assistant professor of surgery, and Dr. James S. White, assistant resident in pediatrics.

Dr. Van Wyk's paper was entitled "The Treatment of Thyrotoxicosis in Childhood with Thiouracil Drugs: Follow Up on 16 Cases." The meeting was held June 15-18 in Quebec City, Canada.

* * *

Dr. Carl E. Anderson, associate professor of biochemistry and nutrition, attended a two weeks' conference recently at the Massachusetts Institute of Technology, Cambridge, Massachusetts. The conference was on biophysical and biochemical cytology and featured the application of newly developed biophysical and biochemical techniques in the study of the structure of biological materials and the role of this structure in determining biological function.

* * *

Dr. F. Douglas Lawrason, assistant dean of the University of North Carolina School of Medicine, has been appointed provost for medical affairs and acting dean of the Medical School at the University of Arkansas, it was announced by President John T. Caldwell during commencement exercises at the University in Fayetteville, Arkansas.

While the University of Arkansas has had a School of Medicine for some years, a new health center for the University is now being completed at Little Rock, consisting of a 500-bed hospital with Schools of Medicine, Nursing and Pharmacy.

Dr. Lawrason, who will assume his duties August 1, will be the chief administrative officer of the new center with full responsibility for the educational program and over-all operation, Dr. Caldwell said.

In addition to his assistant deanship, Dr. Lawrason has served as assistant professor of medicine in the University of North Carolina School of Medicine since August, 1953. Prior to that time he was on the staff of the Yale School of Medicine and with the National Research Council of the National Academy of Sciences in Washington, D. C.

For three years he was professional associate with the National Research Council, coordinating research and development for the National Blood Program.

From 1946-1948, Dr. Lawrason served with the U. S. Naval Reserve, including work at the Naval Medical Research Institute, Bethesda, Maryland, where he carried out studies in anemia, and in hematologic effect of atomic bomb radiation.

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Dr. William P. Richardson, assistant dean for Continuation Education, University of North Carolina School of Medicine, has announced the following postgraduate courses:

Postgraduate course Morganton, September 21-November 2

Postgraduate course Asheville, September 22-November 3

Three-day course in surgery—Chapel Hill, November 28, 29, 30

Eight-weeks' program on general medicine — Chapel Hill, October 5-November 23

Postgraduate course—First District Medical Society, January 11-February 15

Industrial Health program—Chapel Hill, February 9 and 10

Postgraduate course Statesville, March 13-April 17

Program on General Medicine Chapel Hill, Week of March 5

Eight-weeks' program—Chapel Hill, February 15-April 11

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Miss Ellen Anderson, medical technologist in the Department of Pathology, was elected recording secretary of the American Society of Medical Technologists at its Twenty-third annual convention held recently in New Orleans, Louisiana. Miss Anderson is a native of Greenwood, South Carolina, and received her training in medical technology at the Medical College of the State of South Carolina in Charleston. She received her baccalaureate degree from the University of North Carolina in Chapel Hill.

Miss Anderson is an active member of the North Carolina Society of Medical Technologists, serving as its president in 1954-1955.

* * *

Dr. John B. Graham, associate professor of pathology, University of North Carolina School of Medicine, was the guest speaker at the June meeting of the Alamance-Caswell County Medical Society. He spoke on "The Clinical Management of Hemophilia and the Hemophiloid States."

* * *

RESERVATIONS BEING MADE FOR POSTGRADUATE CRUISE

By June 6 more than 100 had booked passage for the Caribbean-South American cruise, beginning November 23, under the sponsorship of the Duke School of Medicine, according to an announcement by Mr. H. H. Allen, president of the Allen Travel Service, Inc. Mr. Allen, who will be in personal charge, says that prospective passengers should make their reservations early.

A number of subjects will be studied during the postgraduate cruise. The faculty members will be: Dr. Wilburt C. Davison, James B. Duke, professor of pediatrics and dean of the School of Medicine; Dr.

Bayard Carter, professor of obstetrics and gynecology; Dr. Barnes Woodhall, professor of neurosurgery; Dr. J. Lamar Callaway, professor of dermatology and syphilology, and Dr. William Nicholson, professor of medicine and director of Postgraduate Education.

Although the cruise will be sponsored by the Duke School of Medicine, it will be open to the public, Mr. Allen said. He also stated that twenty-five hours of formal teaching will take place and will count toward the 150 hours of postgraduate study required of certain physicians every three years. A certificate of attendance at scientific meetings will be issued, he said, which can be used for purposes of income tax computation.

NEW HANOVER COUNTY MEDICAL SYMPOSIUM

The following speakers will take part in the New Hanover County Medical Symposium to be held at Wrightsville Beach on Friday, August 19. Drs. R. Finley Gayle, president American Board of psychiatry and professor of psychiatry, Medical College of Virginia; Priscilla White, Instructor at Harvard and Tufts Medical School; Louis K. Diamond, professor of pediatrics, Harvard Medical School; William F. Meacham, professor of neurosurgery, Vanderbilt School of Medicine; and Briggs J. White, director of the Chemistry and Toxicology Laboratories, Federal Bureau of Investigation.

NORTH CAROLINA STATE BOARD OF HEALTH

Dr. J. W. R. Norton, State Health Officer, served as presiding officer at the annual meeting of the Southern Branch, American Public Health Association, held in New Orleans, May 11-13. He also addressed the general session of the Louisiana Public Health Association on May 10 and a group of faculty members and students at the Tulane Medical School on the evening of May 13. On May 15 he arrived in Mexico City, where he joined the United States delegation to the Eighth World Health Assembly, which was already in session.

EDGECOMBE-NASH MEDICAL SOCIETY

The Edgecombe-Nash Medical Society held its regular monthly meeting in Rocky Mount on June 8. The usual social hour was just prior to the meeting. Dr. John Chambliss was in charge of the program, and introduced as guest speaker, Dr. W. M. Alexander, of the Eastern Carolina Tuberculosis Hospital in Wilson, who discussed recent advances in the treatment of tuberculosis.

NEWS NOTES

Lieutenant Commander George F. Bond, MC, USN, of Bat Cave, who is now Submarine Squadron One Medical Officer at Pearl Harbor, was honored for his medical accomplishments Wednesday night, June 22, on Ralph Edwards' nationally televised program, "This is Your Life."

A Naval Reservist now specializing in submarine and deep sea diving medicine, Dr. Bond has previously received national acclaim as one of the outstanding country doctors in the United States. Before reporting to active duty with the Navy in November, 1953, he performed eight years of general practice in Bat Cave. He is the Southeast United States Regional Consultant to the American Medical Association Council on Rural Health, and has attended the annual meetings of this council for the past seven years.

Since entering the Naval Service, Dr. Bond has entered fields of medicine entirely different from those concerned with rural health. He has completed

courses in deep sea diving, diving medicine, and submarine medicine. His work now is primarily with medical conditions and problems peculiar to submarines and those which confront divers.

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Dr. R. Leeves McCarty, with offices at 1515 Elizabeth Avenue in Charlotte, has announced the limitation of his practice to surgery of the anus, rectum and colon.

* * *

Dr. John David Charlton has opened his office for the practice of allergy at 823 North Elm Street, Greensboro.

EMORY UNIVERSITY SCHOOL OF MEDICINE

Ground was broken this week for construction of a \$1,000,000 medical clinic building at Emory University, another step in the growth of Emory as a great Southern medical center.

The five-story stucco and limestone structure will face Emory University hospital on Clifton Road, and is expected to be completed within a year. Nearby are the recently constructed Woodruff Memorial research building, and Aidmore Hospital, and tied in with Emory's medical development are the Glenn building at Grady Hospital, downtown headquarters of the medical school; the new Grady Hospital under construction, staffed by Emory; and a proposed Communicable Disease Center, a six-building project that will go up on a 15-acre tract on Clifton Road.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

Public Relations Institute Planned

The 1955 Public Relations Institute of the American Medical Association will be held in Chicago August 31 and September 1 at the Duke hotel. The round-up of events will include discussions on grass roots activity in national legislation, basic public relations techniques, medicine in the magazines, and the individual's role as a public relations communicator. In addition, a session on forthcoming A.M.A. public relations activities and a showing of A.M.A. motion pictures will be held. James E. Bryan, author of "Public Relations in Medical Practice," will discuss his theories at a country-style luncheon, and special tribute will be paid to county societies at another informal luncheon session.

All medical society officers and headquarters personnel, public relations committee chairman, and Woman's Auxiliary personnel and officers are cordially invited to attend.

* * *

New Guide For Medical Practice Units

A comprehensive planning guide on medical practice units, recently developed by the Sears-Roebuck Foundation after consultation with the American Medical Association, will be distributed in July by the Physicians Placement Service of the Council on Medical Service. This 80-page brochure provides a handy check list for physicians or community leaders who wish to establish medical practice units. Comparative advantages and disadvantages of building, re-modeling or renting are discussed. Also included are sample floor plans and complete information on the actual management of a practice after the unit has been completed. In addition, physicians will find the sections devoted to types of organization, division of income, retirement, and sickness and death benefits of value in their practice.

Copies of the brochure will be sent to medical societies having executive secretaries, all medical

schools and teaching hospitals. Because of the size and cost of the brochure, additional quantities will be made available to state and county societies for loan only to individual physicians.

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A.M.A. Approves Five New Simplified Insurance Claim Forms

Approval has been granted by the A.M.A.'s Council on Medical Service to five new simplified insurance claim forms drawn up by a special committee of the Health Insurance Council. This committee which worked in collaboration with the A.M.A. Council's Committee on Prepayment Medical and Hospital Service included representation from all types of private insurance carriers. At the present time, a total of six simplified insurance claim forms have been approved by the American Medical Association.

The additional claim forms may be identified by the following symbols and titles: ID-1—Attending Physician's Statement, Accident or Sickness (Individual Insurance); IDS-1—Attending Physician's Supplementary Statement (Individual Insurance); GD-1—Attending Physician's Statement (Group Insurance); GDS-1—Attending Physician's Supplementary Statement (Group Insurance), and IPHS-1—Attending Physician's Statement, Accident or Sickness (Individual Hospital or Surgical). These five forms together with GS-1 (Group Surgical Expense, approved in 1954) are, in essence, adaptations of two basic forms—one designed for groups and the other for insurance underwritten on an individual or non-group basis.

It is hoped that the majority of the insurance companies identified with the Health Insurance Council soon will use these forms in their day-to-day claims administration and that physicians throughout the country will cooperate by completing the simplified forms promptly to facilitate the administration of claims.

* * *

Third Standard Nomenclature Institute

The third series of three-day classes covering the practical applications of the Standard Nomenclature of Diseases and Operations in the hospital or medical clinic will be conducted October 10-11-12 at A.M.A. Headquarters, Chicago. Included in the short course will be lectures on the theory, basic principles and installation of the Nomenclature relating to the topographic section. Practice in coding also will be offered. Lectures on theory will be given by Adaline C. Hayden, C.R.L., associate editor of Standard Nomenclature, A.M.A., and on anatomy by Edward T. Thompson, M.D., chief of programs operations, hospital facilities, U.S. Public Health Service, Washington, D. C. Classes will be restricted to the first 100 registrants. Applications should be sent immediately to Mrs. Hayden at A.M.A. Headquarters.

* * *

A.M.A. Studies Absence of Workers For Congress Program

Plans are being made to include a one-day session on the general subject of absence due to non-occupational disability at the A.M.A.'s annual Congress on Industrial Health to be held next January in Detroit. A preliminary planning meeting was held recently with staff members of the Councils on Industrial Health and Medical Service and selected authorities in the field.

COURSE IN POSTGRADUATE GASTROENTEROLOGY

The American College of Gastroenterology announces that its annual course in postgraduate gastroenterology will be given at the Shoreland in Chicago, on October 27, 28, 29, 1955.

The course will again be under the direction of the co-chairmen, Dr. Owen H. Wangenstein, professor of surgery of the University of Minnesota Medical School, who will serve as surgical co-ordinator, and Dr. I. Snapper, director of medical education, Bethel Hospital, Brooklyn, New York, who will serve as medical co-ordinator. Drs. Wangenstein and Snapper will be assisted by a distinguished faculty selected from the medical schools.

The subject matter, to be covered, from a medical as well as a surgical viewpoint, will include essentially the advances in diagnosis and treatment of gastrointestinal diseases and a comprehensive discussion of diseases of the mouth, esophagus, stomach, pancreas, spleen, liver and gallbladder, colon and rectum, with special studies of radiology and gastroscopy.

For further information and enrollment write to the American College of Gastroenterology, Department P.G., 33 West 60th Street, New York 23, New York.

NATIONAL MULTIPLE SCLEROSIS SOCIETY

The cause of multiple sclerosis, disease of young adults, is as elusive now as it was in 1835 when the disease was first observed and described, although several tantalizing clues are presently being explored, it was revealed at the eighteenth session of the Medical Advisory Board Meeting of the National Multiple Sclerosis Society, held at the Conrad Hilton Hotel in Chicago last month.

Fifteen progress reports were delivered by distinguished scientists in the field of multiple sclerosis. Invited guests included Dr. Douglas McAlpine of the Middlesex Hospital, London, England, and Dr. R. S. Allison of the Royal Victoria Hospital, Belfast, Ireland, who spoke on the incidence of multiple sclerosis in their respective countries, and made brief statements on the scope of multiple sclerosis research projects there.

Dr. Hans H. Reese, professor of neuropsychiatry, University of Wisconsin Medical School and chairman of the Medical Advisory Board, and Dr. Augustus S. Rose, professor of medicine in neurology, University of California, chairman-elect, presided. A summary report was delivered by Dr. Harold R. Wainerdi, medical director of the National Multiple Sclerosis Society.

The Society has supported 48 research projects, including five research clinics, at a total cost of \$792,414, during the nine years since its founding. During that time, an average of 41 per cent of all funds has been spent on research programs. The only national voluntary health agency dedicated to combating multiple sclerosis and allied neurologic diseases through its programs of research, rehabilitation, patient service and clinics, the Society is presently seeking a minimum of \$2,000,000 to meet these needs.

* * *

Dr. Hugo Wolfgang Moser, postgraduate investigator in internal medicine and biochemistry at the Graduate School of Arts and Sciences, Harvard University, has been appointed the first research fellow of the National Multiple Sclerosis Society, according to an announcement by Dr. H. Houston Merritt, professor of neurology, Columbia University, and chairman of the Society's Fellowship and Scholarship Committee.

The appointment is the first made under the recently inaugurated fellowship program of the Multiple Sclerosis Society, and supplements the national society's program of research grants, which are awarded to investigators working on specific projects.

AMERICAN BOARD OF CLINICAL CHEMISTRY

The American Board of Clinical Chemistry, Inc., held its annual meeting at Henry Ford Hospital, Detroit, May 20-21, 1955. Three clinical chemists, who successfully passed the examination given by the Board last October were certified: Sol. I. Dulkin, Lawrence C. Kier, and Otto E. Lobstein. The total number of certified clinical chemists is now 241.

A complete Directory of Certified Clinical Chemists may be obtained by writing to the Secretary-Treasurer, Dr. O. H. Gaebler, Henry Ford Hospital, Detroit 2, Michigan, and will be sent without charge to hospital departments or other laboratories which engage in clinical chemistry.

Clinical chemists interested in being certified should also write for the Instructions to Applicants for Certification. In order to be considered for admission to the next regional examinations, which will probably be held during October, 1955, candidates should file their applications immediately.

The Board elected the following officers for the coming year: Marschelle H. Power, president; Clarence W. Muehlberger, vice-president; and Oliver H. Gaebler, secretary-treasurer. Other present members of the Board are: Joseph W. E. Harrison, Arnold E. Osterberg, William A. Wolff, Warren M. Sperry, Harry Sobotka, Robert M. Hill, and Albert L. Chaney.

UNITED CEREBRAL PALSY

Forty-six medical research and professional training grants totaling \$395,000 have been approved by United Cerebral Palsy as the spring series of its 1955-56 research and training program, it was announced recently by Jack Hausman, U.C.P. national president.

Twenty-three of these grants, totaling \$207,193, are for medical research, Mr. Hausman said. The remainder of the grants, amounting to \$187,807, will be used to train professional personnel now badly needed to make treatment and other care available to more of the cerebral palsied. Included are fellowship and scholarship programs for physicians, physical and occupational therapists, teachers, dentists, vocational guidance counselors, and pediatric neurologists. Other training grants support summer workshops or year-round training programs at leading hospitals and universities.

NEW YORK ACADEMY OF MEDICINE

"Problems of Aging" will be the subject of the twenty-eighth annual Graduate Fortnight, to be held in New York City, October 10 to 21, under the sponsorship of the New York Academy of Medicine. All interested persons, non-medical as well as medical will be welcome as participants in this graduate symposium.

Further inquiries relative to the Graduate Fortnight should be addressed to the Executive Secretary, Committee on Medical Education, The New York Academy of Medicine, 2 East 103 Street, New York 29, New York.

MISSISSIPPI VALLEY MEDICAL SOCIETY

The twentieth annual meeting of the Mississippi Valley Medical Society will be held at the Hotel Jefferson, St. Louis, September 28, 29, 30. More than 50 clinical teachers from leading medical schools will conduct this intensive postgraduate assembly, which will present the latest advances in medicine.

The program will include six panel discussions—Hypertension and Obstetrics (September 28), Geriatrics and Psychosomatic Medicine (September 29), Biliary Tract Diseases and G-1 Bleeding (September 30). The program will be conducted by leading clinical teachers from the medical schools in Columbia and St. Louis, Missouri, Chicago and Iowa City, in addition to clinicians from more distant states including Dr. Elmer Hess, president of the American Medical Association; Drs. Edward N. Cook, Richard M. Schick, Waltman Walters and Eric E. Wollaeger of the Mayo Clinic; Dr. Arthur C. Corcoran of the Cleveland Clinic; Dr. A. R. Curren of the University of Wisconsin; Dr. Robert P. Cutler, of the U. S. P. H. S. Narcotic Hospital, Lexington, Kentucky; Dr. George A. Hellmuth of Marquette University, Milwaukee; Dr. Edward Henderson, Montclair, New Jersey, editor, Journal of the American Geriatrics Society; Dr. William C. Menninger, Topeka, Kansas, of the Menninger School of Psychiatry; Dr. Wm. L. Watson, New York University—Bellevue Medical Center, New York; Dr. Arnold S. Jackson, President of the International College of Surgeons; and Dr. Wm. L. Valk of the University of Kansas.

All members of the A.M.A. are cordially invited and urged to attend. (Non-members pay a \$5.00 registration fee). There will be a large exhibit hall of technical and scientific exhibits. The twelfth annual meeting of the American Medical Writers' Association, "America's only Association Devoted to Improvement of the Written Word of Medicine," will also meet at the Hotel Jefferson, September 30, October 1. Further details of both meetings may be obtained from Harold Swanberg, M.D., Secretary, 209-224 W.C.U. Building, Quincy, Illinois.

AMERICAN MEDICAL WRITERS' ASSOCIATION

The twelfth annual meeting of the American Medical Writers' Association will be held at the Hotel Jefferson, St. Louis, September 30, followed by an Association sponsored Workshop on Medical Writing, October 1.

All physicians and collegiate graduates interested in medical writing, journalism or publishing are cordially invited and urged to attend the meeting and to become Association members. There is no registration fee for attending the meeting but non-members will pay a \$5.00 registration fee for the Workshop.

AMERICAN UROLOGICAL ASSOCIATION

The American Urological Association offers an annual award of \$1,000 (first prize of \$500, second prize \$300, and third prize \$200) for essays on the result of some clinical or laboratory research in urology. Competition shall be limited to urologists who have been graduated not more than 10 years, and to men in training to become urologists.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Statler Hotel, Boston, Massachusetts, May 28-31, 1956.

For full particulars write the Executive Secretary, William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. Essays must be in his hands before December 1, 1955.

AMERICAN DERMATOLOGICAL ASSOCIATION, INC.

The American Dermatological Association is again offering a series of prizes for the best essays submitted for original work, not previously published, relative to some fundamental aspect of dermatology or syphilology. The purpose of this contest is to stimulate investigators to original work in these fields. Cash prizes will be awarded as follows: Five hundred dollars, four hundred dollars, three hundred dollars and two hundred dollars for first, second, third and fourth place, respectively.

Manuscripts typed in English with double spacing and ample margins as for publication, together with illustrations, charts and tablets, all of which must be in triplicate, are to be submitted not later than November 15, 1955.

The manuscripts should be sent to Dr. J. Lamar Callaway, Secretary, American Dermatological Association, Duke Hospital, Durham, North Carolina. Those which are incomplete in any of the above respects will not be considered. Manuscripts should be limited to ten thousand words or less and the time of presentation of prize essay shall not exceed thirty minutes. In order to aid fair judgment, papers should be submitted under a nom de plume, with no information anywhere in the paper as to the institution or clinic where the work was done. Along with the paper by "John Smith" for example, a plain sealed envelope bearing the nom de plume, plus the full name and address of the author, is also submitted. Only after all the papers have been judged and returned to the chairman are the sealed envelopes open and the winners known.

Competition in this prize is open to scientists generally, not necessarily to physicians.

The award will be made by a committee of judges selected to pass on the essays by the Research Aid Committee of the American Dermatological Association and the decision of the judges shall be final. The essays are judged on the following considerations: (1) originality of ideas; (2) potential importance of the work; (3) experimental methods and use of controls; (4) evaluation of results; (5) clarity of presentation. This contest is planned as an annual one, but if in any year, at the discretion of the Committee and judges, no paper worthy of a prize is offered, the award may be omitted.

The results will be announced prior to January 1, 1956, and papers not winning a prize become the authors' property and will be return promptly. Any paper which wins a prize becomes the property of the American Dermatological Association.

The candidate winning first prize may be invited to present his paper before the annual meeting of the American Dermatological Association with expenses paid in addition to the five hundred dollar prize. Further information regarding this essay contest may be obtained by writing to the Secretary of the American Dermatological Association.

AMERICAN COLLEGE OF CHEST PHYSICIANS

The twenty-first annual meeting of the American College of Chest Physicians was held at the Ambassador Hotel, Atlantic City, New Jersey, June 1 through 5. More than 1,400 physicians and guests registered for the meeting. Fellowship certificates were awarded to 251 physicians at the Convocation ceremony held on Saturday, June 4. The following officers were elected for the year 1955-1956:

President—James H. Stygal, Indianapolis, Indiana.

President-Elect—Herman J. Moersch, Rochester, Minnesota.

First Vice President—Burgess L. Gordon, Philadelphia, Pennsylvania.

Second Vice President—Donald R. McKay, Buffalo, New York.

Treasurer—Charles K. Petter, Waukegan, Illinois.

Assistant Treasurer—Albert H. Andrews, Chicago, Illinois.

Chairman, Board of Regents—John F. Briggs, St. Paul, Minnesota.

Historian—Carl C. Aven, Atlanta, Georgia.

The twenty-second annual meeting of the College will be held at the Sherman Hotel, Chicago, Illinois, June 7 through 10, 1956.

Dr. George Curtis Crump, Asheville, serves as Governor of the College for North Carolina.

TOBACCO INDUSTRY RESEARCH COMMITTEE

Claims that smoking causes "this thing or that" are generally not based on complete and accurate scientific knowledge, Dr. Robert C. Hockett, associate scientific director of the Tobacco Industry Research Committee said recently.

"Tobacco use has been both applauded and condemned for centuries without much being known about it," Dr. Hockett said. It is time that careful scientific investigation should replace folklore and tradition in such matters.

"The Tobacco Industry Research Committee is supporting scientific investigation into many phases of tobacco use and human health in order to get the facts," Dr. Hockett said. Considerable research is currently being sponsored into such subjects as: the effects of tobacco smoking on the heart and blood vessels of living volunteers; the influence on the blood flow of the skin and of the muscles of the body extremities; and the measurement of coronary blood flow in humans before and after intravenous injections of nicotine, and after smoking cigarettes.

Dr. Hockett said a primary objective of the Scientific Advisory Board, which develops and directs the research program for the Committee, is to further the search for the cause or causes of cancer, particularly lung cancer, and of cardiovascular diseases, and for the control of these diseases.

Attention also is given, he said, to research projects that will add to the understanding of tobacco smoke and its constituents, and of tobacco use by people.

HEALTH INSURANCE COUNCIL

Nearly two out of every three men, women, and children in the United States now are protected by voluntary health insurance, the Health Insurance Council announced recently in releasing the findings of its ninth annual survey of health insurance in America, as of December 31, 1954.

"This survey shows," said Council Chairman John H. Miller, "that many more Americans now have more and better health insurance than ever before. Measured in terms of benefits paid out by insuring organizations in 1954, striking progress was made during the year. And the survey figures indicate continuing progress at rapid rates for the foreseeable future."

Mr. Miller estimates that, by the end of this month, some 104 million persons will have voluntary health insurance against hospital expenses. About 89 million people will have surgical expense protection, and 50 million will have regular medical expense protection. These figures are based on conservative projections of the 1954 year-end data presented in the survey, Mr. Miller said.

(BULLETIN BOARD CONTINUED TO PAGE 278)

The Month in Washington

This Congress appears to have established a record for the introduction of medical legislation—but unless something unusual happens and happens fast there will be no record set for laws passed.

With the summer well along, and tentative adjournment just a few weeks off, Congress had not yet revived its interest in medical bills. Most of the measures that were offered in January and February, to the accompaniment of hopeful speeches by their sponsors, have been allowed to lie undisturbed in committee files. In some cases hearings were held, where persons and organizations vitally interested could give enthusiastic testimony. Very few bills indeed got farther than that in the first six months of the session.

One reason is the close balance in Congress, and the reluctance of either party to get behind bills offered by the other, and which might have appeal to the public in the 1956 election year. Another is worry over putting the federal government still deeper into the red in a year of prosperity, if not of boom.

Also, key committees for weeks were preoccupied with various bills on Salk vaccine, its control and its cost — weeks when the committees otherwise might have worked on, and possibly reported out, other less controversial health bills. A specific example is the Senate Labor and Welfare Committee. This committee was about ready to report out a House-passed bill for a national survey of mental health problems when it found itself deeply mired in the Salk situation. The mental health bill still is likely to be enacted, but the long delay didn't help much.

Another bill, early in the session regarded as about certain of enactment, calls for the establishment of a voluntary, contributory system of health insurance for federal civilian employees. After a year's study of the complications involved, a special task force prepared and made public the administration's program in January. The expectation was that a bill to carry out the plan would be offered in a few weeks at the most, and would be passed in a few months.

But it didn't work out that way. The administration decided that it couldn't press

for these medical benefits (U.S. would pay about one-third of insurance premiums) until the extent of a general U.S. pay raise had been fixed by Congress. So it was June before this U.S. employee health insurance bill was even sent to Congress, and then the administration was in no rush to have it passed.

Troubles also beset the Defense Department's bill to extend the doctor draft act another two years. Although the extension was strongly opposed by both the American Medical Association and the American Dental Association, the House Armed Services Committee accepted the Defense Department's arguments and voted out the bill, 24 to 0.

Ordinarily such a committee vote would have sent the bill sailing on through the House and to the Senate. But not this time. Chairman Howard Smith (D., Va.) of the House Rules Committee lectured the Armed Services Committee and the Defense Department for not making an effort to solve the doctor problem by some other means. There was consequently a delay before floor action—not fatal, but a delay.

Some bills, once considered important, were effectively ignored by Congress. One was the Eisenhower-Hobby plan for reinsurance of health insurance groups, defeated last year. The administration tenaciously defended it, but the committees weren't enough impressed to schedule hearings during the first six months of the session.

The administration bill for federal guarantee of construction loans for hospitals and clinics stirred some Capitol Hill interest but no hearings have been held. Then came all the bills on polio vaccine, and this measure also was put on the shelf.

A bi-partisan bill for U.S. grants for constructing and equipping medical research facilities travelled about the same course: hearings, a high degree of enthusiasm from medical researchers, confidence that the plan would go through—then no more action.

For a time Senator Hill (D., Ala.), the key Senator on health bills, was determined to put through his bill for federal aid for building medical schools. When hearings were held the bill did not appear to arouse opposition from any quarter, yet it was pushed farther and farther to the rear.

BOOK REVIEWS

Casimir Funk: Pioneer in Vitamins and Harmones. By Benjamin Harrow, 209 pages, New York: Dodd, Mead & Company, 1955.

This biography, "Casimir Funk: Pioneer in Vitamins and Harmones," presents the first full length word portrait of this important scientist.

Born of a noted Polish dermatologist who influenced him profoundly, Funk pursued his studies in biochemistry in Berne, London, Paris, and other cities throughout the world. It was in Berne, at the age of 20, that he did his first experimental work with harmones and became a Ph.D. This was a stepping stone to his famous studies on vitamins.

Funk toiled week after week, and month after month, developing polyneuritis in pigeons (comparable to beriberi in humans) by feeding them polished rice, administering rice polishings or ground yeast, and watching the polyneuritis disappear. By assiduous fractionation he finally obtained fractions A and B, fed a polyneuritic pigeon fraction A and saw it dying, gave it fraction B and watched it recover. On he went subdividing fraction B, discarding noneffective fractions, subdividing again and again until, at last, he obtained a concentrated substance which proved to be thiamine or vitamin B₁, the anti-beriberi factor.

Funk then announced that more than one specific substance existed and was shortly proven right. He invented the name "vitamine" for such substances—"vita" indicating life, and "amine" for amine which he wrongly believed it to be. It was only after thirty years of bitter opposition that the word "vitamin" (the final "e" dropped) was adopted and became an important part of nutritional history.

In 1936 Dr. Funk joined the U. S. Vitamin Corporation as research consultant and has remained with the company since. For this company he developed the production of nicotinic acid and niacinamide. For many years he has been "occupied with the broad field of cancer and its possible treatment."

Over 150 scientific papers by Funk and collaborators have been published throughout the world and listed by Harrow. This shy, gentle, charming man, "who has always strived to work for the betterment of humanity" is, at 71, "at the height of his intellectual vigor."

* * *

The Colon: Its Normal and Abnormal Physiology and Therapeutics. By M. L. Tainter and Thomas P. Almy, Conference Chairmen. *Annals of the New York Academy of Sciences*, vol. 58, pages 293-540, 1954.

The twenty-five assorted papers presented at this conference may be classified under four general topics. The first part consisted of five papers on the physiology and pharmacology of the normal colon. Clinicians will likely be interested in the summary of the normal and abnormal motility patterns of the colon as studied by the group at the Mayo Foundation under Dr. C. F. Code. The action of drugs on colonic motility is reported by Dr. Fred Kern using a similar balloon pressure recording technique. The use of barium techniques in studying the colon are discussed briefly but not illustrated. A panel discussion follows this section as for the other parts.

Our current theories of the etiology of constipation, obstipation and ulcerative colitis are discussed in the next part consisting of five more papers. A lengthy discourse on "Childhood Experience and

Colonic Disorder" by Dane G. Prugh should interest not only pediatricians but any physician-parent.

The section on the pharmacology of the abnormal colon deals largely with laxatives. One article discusses antispasmodic therapy of the colon. A paper by Gray and Reifstein judging the effects of corticoid therapy of ulcerative colitis by lysozyme titers and demonstrating the lack of effects of the so-called "anti-lysozyme" detergents was quite interesting.

The final section on therapy of colonic disorders is concerned mainly with constipation and ulcerative colitis. Certain specialized problems are covered such as the use of laxatives by the aged and constipation in institutionalized patients. Many different views of ulcerative colitis are presented throughout this whole symposium which reflect the interest this highly refractory condition attracts among clinical investigators.

Although there is a large amount of repetition among these papers the variety of viewpoints afford the reader a better sample of average medical opinion than would a review of the subjects by single authors.

Hypaque Found To Produce "Superior" Excretory Urograms

Excretory programs produced by Hypaque, a new contrast agent, showed a "nearly 100 per cent increase" in quality over a control group, according to a report in the *Bulletin of The Mason Clinic* (9:1, 1955).

Hypaque, manufactured by Winthrop-Stearns Inc., was given to 104 patients, while a similar number of cases received another contrast medium currently in wide use. It was found that 80 per cent of the excretory urograms in the Hypaque series demonstrated "excellent" or "good" definition of the kidneys, compared with 38 per cent in the control group. Similar high quality diagnostic films of the ureters were obtained in 67 per cent of the Hypaque cases, compared with 38 per cent of the controls; and in 57 per cent of the bladders visualized with Hypaque, compared with 19 per cent of the controls.

There were no clinically significant objective or subjective reactions observed during the study with Hypaque, and particularly no significant vasomotor disturbances. The same "good results" with respect to quality and reaction incidence are cited by the authors in a subsequent study of 200 excretory urograms. Both studies, the article states, demonstrated Hypaque's "definitely superior diagnostic performance."

Winthrop-Stearns Names Medical Department Head

Dr. E. J. Foley, medical director of Winthrop-Stearns Inc., pharmaceutical manufacturer, has been appointed to the additional post of head of the medical department, succeeding the late Dr. Frank J. Stockman, it was announced by Dr. Theodore G. Klumpp, president.

Dr. Foley has been associated with the Winthrop organization for the last 22 years. In addition to his duties as medical director, he will also direct activities of the company's editorial department and medical library. Department heads associated with Dr. Foley are: Dr. Ernest Zander, associate medical director; Dr. Desmond Slevin, associate medical director; Mrs. Mildred P. Clark, chief medical librarian, and Miss Dorothy Stiebling, chief of the editorial department.

BULLETIN BOARD

(CONTINUED FROM PAGE 275)

BLUE SHIELD MEDICAL CARE PLANS

John W. Castellucci, executive director of Blue Shield Medical Care Plans has announced that the recently tried infringement suits in Texas and Mississippi, involving the well-known Blue Shield service mark and the shield symbol, have been settled. The validity of the Blue Shield service marks has been recognized. The defendants, who were using Blue Seal and White Seal, have each agreed to stop immediately any further preparation of sales material, or advertising of any kind, using these marks. Details of the Settlement are set out in Agreements filed with the U. S. District Courts in Austin, Texas, and Jackson, Mississippi where the cases were tried.

INSTRUCTIONAL COURSE IN INDUSTRIAL HEALTH

The Institute of Industrial Health of the University of Cincinnati announces that the course of instruction in occupational skin problems will be given during the week of October 10-14. It will be presented by the Department of Preventive Medicine and Industrial Health, University of Cincinnati, in collaboration with the Occupational Health Program of the United States Public Health Service, and the Department of Dermatology and Syphilology of the University of Cincinnati. The objective of this course is to give physicians a greater understanding of cutaneous problems of occupational origin.

Physicians interested in attending the course should write for an application blank to Secretary, Institute of Industrial Health, Kettering Laboratory, Eden and Bethesda Avenues, Cincinnati 19, Ohio. Early application is advised since attendance will be limited.

DEPARTMENT OF THE ARMY

The Army Medical Service will conduct its post-graduate course on the medical care of atomic casualties at the Walter Reed Army Medical Center six times in the fiscal year beginning July 11, 1955, according to an announcement from Major Gen. Silas B. Hays, Army Surgeon General.

This is being done to meet the greatly increased demand from civilian physicians throughout the country for admission to the sessions.

Since a strict quota is maintained under an allotment system, applications for attendance from physicians or other qualified professional personnel must be made through their respective affiliations. In addition to the American Medical Association and the professional schools these affiliations include the United States Public Health Service, the Federal Civil Defense Administration, the Veterans Administration, and the Armed Forces medical services.

Reserve medical officers may apply through the chief of their military district to the Commanding General of the appropriate Army area.

Applicants are required to file their requests four weeks in advance of the course date desired. Dates for the six courses of the year are: July 11-16; September 12-21; December 5-14; January 30-February 8; March 19-28; and June 4-13. Lodging and travel expenses for those attending the course are borne by the individual or the organization he may represent.

Major General Silas B. Hays, Army Medical Corps, was sworn in as the thirtieth (30th) Surgeon General of the Army, June 1 in Washington.

General Hays, who has been Deputy Surgeon General for the past four years, replaces Major General George E. Armstrong whose statutory term expired May 31 and who is scheduled to retire from the Army in August of this year.

U. S. AIR FORCE

The Surgeon General of the U. S. Air Force, Major General Dan C. Ogle, was the recipient of two high civilian awards within the month of June. During the convocation ceremony of the American College of Chest Physicians, held in Atlantic City on June 4, 1955, he was presented with an honorary fellowship in the College. On June 12, 1955, at Eureka, Illinois, during the centennial commencement of Eureka College, he was presented a centennial citation as being representative of outstanding achievement in his particular field.

VETERANS ADMINISTRATION

More than 200 veterans in Veterans Administration hospitals have just been awarded \$5,000 worth of prizes in the ninth annual nation-wide writing contest sponsored by the Hospitalized Veterans Writing Project, a volunteer organization, in co-operation with VA's Special Services.

Plans now are under way for the tenth annual writing contest for hospitalized veterans, to be held next spring. In the meantime, veteran-patients are encouraged to keep in practice through quarterly writing contests and through correspondence with volunteer Writing Aides.

Patients can get further information about next year's contest from their hospital or from Hospitalized Veterans Writing Project headquarters at 1020 Lake Shore Drive, Chicago.

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

In a report released by Oveta Culp Hobby, Secretary of Health, Education, and Welfare, the Ad Hoc Interdepartmental Committee on Community Air Pollution urged a broad Federal program of research and technical assistance in air pollution problems.

The Committee recommended legislation authorizing such a program, and suggested the program be administered by the Department of Health, Education, and Welfare, with the assistance of a permanent interdepartmental committee on community air pollution. It said that "safeguarding public health is the most compelling reason for extending Federal assistance on air pollution."

The Committee, which was appointed by Mrs. Hobby last fall at the request of President Eisenhower, was composed of representatives of the Departments of Defense, Agriculture, Commerce, Interior, the Atomic Energy Commission, and the National Science Foundation, in addition to the Department of Health, Education, and Welfare. Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, was chairman of the committee.

* * *

The Public Health Service, U. S. Department of Health, Education, and Welfare, has announced that, in accordance with Federal legislation enacted in August, 1954, it is assuming responsibility for health services for American Indians.

NORTH CAROLINA

Medical Journal



Vol. 16 No. 8
August, 1955

IN THIS ISSUE:

TRANSACTIONS OF THE ONE HUNDRED RED FIRST ANNUAL SESSION

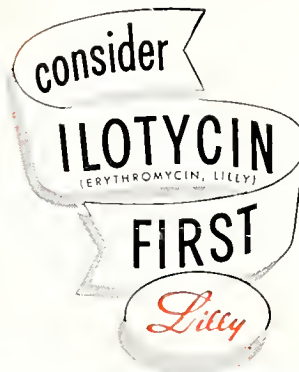
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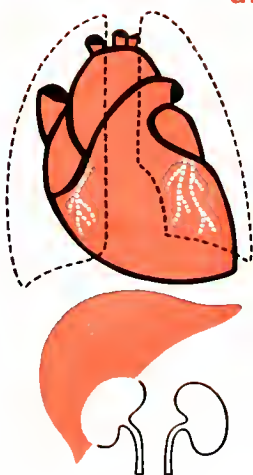
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NORTH CAROLINA MEDICAL JOURNAL

OWNED AND PUBLISHED BY

THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA

VOLUME 16

AUGUST, 1955

NUMBER 8

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

AUGUST, 1955

DR. JAMES W. VERNON

The news that Dr. James W. Vernon died suddenly and quietly on July 16 was no surprise to his close friends. For a long time he had had a precarious hold on life. His blood pressure had been dangerously high for a long time, and some years ago he had had a myocardial infarction. With characteristic courage he had gone on with his work until the final summons came with merciful swiftness in the form of a stroke.

Dr. Vernon lived a full, well rounded life. After his graduation from Jefferson in 1909 and an internship in the Philadelphia Poly-clinic—now the Graduate—Hospital, he be-came associated with the late Dr. Isaac M. Taylor at Broadoaks. He married Dr. Tay-lor's daughter, Sarah, and after Dr. Tay-lor's death was superintendent of Broad-oaks for the rest of his life.

While his major interest was medicine, he was a devoted husband and father and a true citizen. During World War I he served in the Medical Corps of the United States Army with the rank of major. During World War II he shouldered the disagree-able responsibility of serving on the Burke County Selective Service Board. He was re-peatedly elected mayor of Morganton.

The confidence of the State Medical So-ciety in his ability was shown first by his election as a member of the State Board of Medical Examiners in 1932, and as presi-dent of the Society in 1944. One of the finest examples of his true humility and selfless-ness is that, after having been president of the State Society, he agreed to serve as pres-ident of the Burke County Medical Society.

He was a member of the American Medi-cal Association, the Southern Medical Asso-ciation, the American Psychiatric Associa-tion, and was a fellow of the American Col-lege of Physicians.

It is a tribute to his personality that his nephew and foster son and two of his own three sons chose medicine as their life call-ing. The foster son, Isaac M. Taylor, made a brilliant record at Harvard, and is now a member of the faculty of the University of North Carolina Medical School. His oldest son, Taylor, is now associated with his uncle, Dr. E. W. Taylor, at Broadoaks. The youngest son, Charles, has not yet finished his hospital training. The middle son, Liv-ington, is a lawyer.

The word that best described James Ver-non is "gentle." He was in every sense of

the word a gentle man. His gentleness, kindness, and deep understanding of human nature eminently qualified him for dealing with people's sick minds, souls, and bodies. He naturally liked people and was interested in their problems. And like so many truly gentle men he had the unflinching courage to do or say what he considered right.

With his personality and his keen interest in all phases of life, it was inevitable that he should have had a great capacity for friendship. He truly grappled his many friends to his soul with hooks of steel.

James Vernon filled a large place in his own community, in the state, and in the hearts of his friends. He will be sorely missed for years to come.

May God bless his devoted wife and his fine sons, and enable them to carry on his high ideals and unselfish devotion to duty.

* * *

DR. KEMP P. B. BONNER

When Dr. Kemp Plummer Battle Bonner of Morehead City died in his sleep July 2, our State Medical Society lost one of its best members and our state one of its best citizens.

Dr. Bonner graduated from the University of North Carolina in 1901. He got his medical degree from the Medical College of Virginia in 1905 and began practice in Morehead City that same year.

During his 50 years of practice he held many offices, both medical and civic. He was councilor from the First District 1910-1921; director of the State Bureau of Maternity and Infancy 1922-1924; a member of the State Board of Examiners 1910-1920; and vice president of the Federation of State Medical Boards of the United States.

While a member of the State Board of Examiners Dr. Bonner rewrote the Medical Practice Act of the State and revised and installed a new system of records for the Board. This was perhaps his greatest service to the state.

Dr. Bonner's interest was not confined to his chosen profession. He served a number of terms as mayor of Morehead City, and from 1934 until his death was chairman of the Carteret County Board of Commissioners. It was said of him that he never missed a meeting of the Board, but that every year the May meeting was postponed

for a week so that he might attend the annual meeting of the State Medical Society.

Dr. Bonner will be sadly missed at State Medical meetings, but still more in his own community. The esteem in which he was held was well expressed by the editor of the *Carteret County News-Times*:

"Occasionally in the span of life, one comes upon a person endowed with atom-like energy, a keen mind, and a rare, sincere desire to help his fellow man. Blend those elements into one personality and the whole would closely resemble Dr. K. P. B. Bonner."

* * *

SOUTH CAROLINA JOURNAL'S FIFTIETH ANNIVERSARY

The first issue of the *Journal of the South Carolina Medical Association* was published in June, 1905. It has been published continuously ever since. In the issue for June, 1955, the golden anniversary is celebrated by appropriate articles: "History of Medical Journalism in South Carolina," by Dr. J. I. Waring; "Fifty Years of Medicine," by Dr. J. Heyward Gibbs; "Medical Progress Over Fifty Years," by Dr. George R. Wilkinson; "Public Health Progress Since 1905," by Dr. G. S. T. Peoples; "Fifty Years of Surgery in South Carolina," by Dr. Frederick E. Kredel; and "From Handmaiden to Colleague; Pharmacy Comes of Age," by J. Hampton Hoch.

During its first dozen years, the *South Carolina Journal* had a quick turn-over in its editors. The term of the first one, the brilliant Dr. Robert Wilson, lasted less than a year. He was succeeded in turn by Dr. J. W. Jersey, Dr. F. H. McLeod, and Dr. J. C. Sosnowski. From 1912 until his death in 1940, however, Dr. Edgar A. Hines occupied the editorial chair. He was succeeded by dynamic Julian Price, who remained in office until his duties as trustee of the American Medical Association constrained him to resign as editor. Dr. J. I. Waring of Charleston succeeded him in January, 1954. May he occupy the chair for many years to come!

Heartiest congratulations upon this auspicious occasion and best wishes for the next 50 years from the old North State to our southern neighbor!

BULLETIN BOARD

PRESIDENT'S MESSAGE

The Voluntary Poliomyelitis Vaccination Program

At a meeting of the North Carolina State Advisory Committee on Poliomyelitis Vaccine, held in Raleigh on July 9, the Committee reviewed in detail the developments to date in the national poliomyelitis vaccination program.

According to the best information available, it is expected that the Salk poliomyelitis vaccine will become available in increasing quantities until maximum production-distribution will have been reached about January 1, 1956. For the next several months, however, it is expected that the supply of vaccine will be inadequate to meet the demands for it. In order to accommodate children in age groups in which the highest incidence of poliomyelitis occurs, the President's National Advisory Committee on Poliomyelitis Vaccine has designated priority age groups to receive the vaccine until such time as it is available to meet all demands. It is recommended that the medical profession of North Carolina adhere as nearly as possible to the age groups designated by the National Committee, in the administration of this vaccine to private patients. The age groups for which priority has been recommended are as follows:

The first vaccine available from manufacturers will be released for the completion of the National Foundation for Infantile Paralysis vaccination program, which was started in April of this year and included all school children in the first and second grades. A total of 197,841 school children were given the first inoculation and will be offered the second inoculation from the first vaccine which is made available to this state.

The next succeeding priority groups are: ages 5 to 9 years inclusive, 0 to 4 years, 10 to 14 years, and 15 to 19 years. The total number of children in North Carolina from birth through 19 years of age is estimated to be 1,833,818.

The Allocation of Vaccine Available to North Carolina

The allocation of vaccine to each state will be in accordance with the ratio of the state's population (all priority age groups)

to the total population (all priority age groups) of the nation as a whole. Under this plan, North Carolina will be eligible for approximately 3 per cent of all vaccine distributed, or 30,000 cc. of every 1,000,000 cc. distributed by manufacturers. Of the total amount of vaccine shipped to North Carolina, 30 per cent will be available for purchase by public agencies for free administration by public health agencies or private physicians, and 70 per cent of the total will be available for purchase and distribution through ordinary drug channels. All vaccine purchased by public agencies for free administration to the medically indigent will be distributed to and through county health departments.

Importance of Keeping Careful Records of Children Vaccinated

The over-all administration of the state distribution plan, as recommended by the National Poliomyelitis Vaccine Advisory Committee, will entail great responsibility on the part of the state agency if the plan is carried out successfully. To the greatest extent possible, record-keeping by physicians will be curtailed. One concise report, however, will be requested of physicians which will record the name and address of each child vaccinated, together with the name of the manufacturer and the lot number of the vaccine used. Only through the careful reporting of vaccine used in the vaccination of each child will it be possible to investigate the responsibility, if any, of the vaccine used if the subsequent development of a case of poliomyelitis should occur. It is expected that forms for recording individual vaccinations will be furnished to each physician by his county health officer, and the physician will be requested to forward to the county health officer once each week a copy of the record of each vaccination given. As president of the North Carolina State Medical Society, I urge that these records be carefully kept and forwarded.

JAMES P. ROUSSEAU, M.D.

The control of diseases due to an insanitary environment can, obviously, often be accomplished in sudden and dramatic fashion. No such easy victories can be achieved with the contact-borne diseases, since man is much less susceptible to control than his surroundings. Such maladies as tuberculosis and syphilis have been fought almost as effectively but at a slower pace.—C. E. A. Winslow, *The Cost of Sickness and the Price of Health*, WHO Monograph Series, No. 7, 1951.

COMING MEETINGS

North Carolina EENT Society and South Carolina Society of Ophthalmology, Combined Meeting—Columbia, South Carolina, September 12-14.

North Carolina Heart Association, Sixth Annual Meeting—Hotel Robert E. Lee, Winston-Salem, September 29, 30. Concurrent sessions held with the Winston-Salem and Forsyth County Memorial Heart Symposium on September 30.

Tenth District Medical Society Fall Symposium—Memorial Hospital Medical Library, Asheville, October 12.

Duke University Postgraduate Cruise — Aboard the M. S. Stockholm, November 23, December 5.

Mississippi Valley Medical Society, Twentieth Annual Meeting, St. Louis, Missouri, September 28-30.

American Medical Writers' Association, Twelfth Annual Meeting—St. Louis, September 30.

New York Academy of Medicine, Twenty-Eighth Graduate Fortnight (Problems of Aging)—New York City, October 10-21.

American College of Gastroenterology—Chicago, October 27-29.

Endocrine Society, Seventh Annual Postgraduate Assembly—Indianapolis, September 28-October 21.

American College of Chest Physicians, Tenth Annual Postgraduate Course — Hotel Knickerbocker, Chicago, October 3-7; Eighth Annual Postgraduate Course—New York, November 14-18.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Carl E. Anderson, Ph.D., associate professor of biological chemistry and nutrition, has received a grant of \$13,200 for research from the Life Insurance Medical Research Fund, Dr. W. Reece Berryhill, dean of the Medical School, has announced. Notification of the grant came from Francis R. Dieuaide, M.D., scientific director of the fund.

The grant is for a study entitled "The Chemistry and Metabolism of Acetal Phosphatides," and extends over a two-year period. The chemistry of the acetal phosphatides is incomplete, and their function in animal tissues is unknown. This study is designed to isolate members of this fatty aldehyde containing group and learn more of its function and effect on body tissue.

Assisting Dr. Anderson, the principal investigator in this research will be Mr. Claude Piantadosi, graduate student in biochemistry and pharmacy, and Dr. Claude Yarbrow, instructor of biological chemistry.

* * *

Dr. Myron Sandifer, Jr., Dr. Thorndike C. Toops, and Miss Frances Maynard have recently joined the staff of the Department of Psychiatry at the University of North Carolina School of Medicine. Dr. Sandifer and Dr. Toops have both received appointments as instructors in the department, and Miss Maynard has joined the staff as psychiatric social worker.

Dr. Sandifer is a graduate of Davidson College and Harvard Medical School. His psychiatric train-

ing was received at the Yale University Hospital, the U. S. Army and U. S. Navy, and the Beth Israel Hospital, Boston, where he participated in research on psychologic reactions to heart disease.

Dr. Toops received his medical degree from the University of Michigan Medical School, and before coming to Chapel Hill was associated with the Indiana University Medical Center, Indianapolis.

Miss Maynard, a native North Carolinian, received her undergraduate degree from the University of North Carolina, and has completed graduate studies at Tulane University and the New York School of Social Work, Columbia University.

* * *

Dr. Lucie Jessner, professor of psychiatry, University of North Carolina School of Medicine, attended the four-day International Psychoanalytic Congress at Geneva, Switzerland, which was held in July.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Duke University Medical Town Hall, aimed at keeping citizens informed on public health matters, presented the latest advances in the treatment of diabetes in a television program broadcast from Durham last month.

The program was the eighth in a series of monthly public service presentations by the Medical Town Hall in cooperation with Station WTVD, Durham.

Speakers were Dr. William M. Nicholson, internist; Dr. Jerome S. Harris, pediatrician; and Dr. George J. Baylin, radiologist and program moderator.

The pioneering Medical Town Hall program in previous TV presentations has covered accidents in the home, problems in aging, pathology, medical art, and photography, anesthesia, pain, and asthma.

* * *

Dr. J. Lamar Callaway, Duke University dermatologist, left Durham by air, on July 31, for a special 10-day tour in the Alaskan Theatre of Operations for the U. S. Air Force and the Army.

Earlier this year the Duke dermatologist was appointed to the top consulting post in his field for the surgeon general of the Air Force. He also serves as a consultant to the Army surgeon general, the Veterans Administration and the U. S. Public Health Service.

While visiting Air Force and Army installations throughout the Alaskan theatre, Dr. Callaway made ward rounds and consulted on special dermatologic problems, as well as lecturing to medical personnel.

He returned to Durham on August 10.

Author of some 100 articles and books on medical subjects, the Duke skin specialist was recently elected president of the Society for Investigative Dermatology for 1955-1956, and he is one of seven medical authorities who serve on the National Serology Advisory Council.

WINSTON-SALEM HEART SYMPOSIUM

The Heart Association of Winston-Salem and Forsyth County will hold a Heart Symposium at the Robert E. Lee Hotel in Winston-Salem on Friday, September 30, from 9:00 a.m. to 9:00 p.m. Speakers will be Drs. Charles K. Friedberg of New York City, Hugh H. Hussey of Washington D. C., and Arthur J. Merrill of Atlanta.

The North Carolina Heart Association will hold its annual meeting in the same hotel beginning September 29, having concurrent sessions with the symposium on September 30.

NORTH CAROLINA BOARD OF MEDICAL EXAMINERS

The North Carolina Board of Medical Examiners will meet on Monday, October 31, at Grove Park Inn, Asheville, at which time applicants for licensure by endorsement will be interviewed.

EDGECOMBE-NASH MEDICAL SOCIETY

The Edgcombe-Nash Medical Society held its regular meeting in Rocky Mount, July 13.

Dr. W. J. Frohbose was in charge of the program for the July meeting, and presented a paper on "Partial Nephrectomy."

NEWS NOTES

Dr. Robert L. Means has announced the opening of his office for the practice of general surgery at 712 O'Hanlon Building, Winston-Salem.

* * *

Dr. H. B. Perry, Jr., of Greensboro was recently certified by the American Board of Obstetrics and Gynecology. Dr. Perry is associated with Dr. W. Reed Wood.

GREENVILLE MEDICAL DAY

Greenville Medical Day will be observed on October 4 at the Greenville General Hospital, Greenville, South Carolina. Speakers will be Drs. J. Earle Furman and Hugh Smith, Sr., Greenville; Robert Robbins, Temple University, Philadelphia; Robert A. Ross, North Carolina University School of Medicine, Chapel Hill; W. E. Burnett, Temple University School of Medicine, Philadelphia; and J. Elliott Scarborough, Emory University and Grady Hospital, Atlanta.

The Greenville County Medical Society Auxiliary invites visiting wives to a luncheon at the Greenville Country Club, and to a fashion show and tea in the afternoon.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

For Your Patients Only

An attractive new leaflet earmarked "for patients only" will be distributed in September to members of the A.M.A. Entitled "To All My Patients," this 12-page pamphlet (for physicians to distribute to their patients) explains the roles of various persons on the medical team in providing good medical care. In addition, the booklet briefly discusses medical and hospital fees and health insurance. Designed primarily to promote better doctor-patient relationships, the booklet also provides space for the doctor's name, address, and office hours to be inserted at the end. Quantities will be available on request from the A.M.A. Public Relations Department.

Watch For New TV Shows This Fall

The fall schedule for two network medical television programs being produced with the cooperation of the American Medical Association will get started in September. First, Ciba's new "Medical Horizons" show, a half-hour weekly TV series, will be premiered over the ABC-TV network Monday, September 12. (Consult your local station for time.) This documentary series will promote the American way of medical life by presenting specific accomplishments in the field of medicine as exemplified by the teamwork of modern medical research, education, and practice. Featured will be live telecasts from medical institutions and research centers throughout the country.

The first of six shows in the 1955-1956 series of "March of Medicine" programs, presented by Smith, Kline and French Laboratories, will be telecast Tuesday, September 20 over the NBC-TV network. This show will replace Armstrong Cork Company's "Circle Theatre," at 9:30 p.m. EDT.

A.M.A. Studies Grievance Committee Operations

Standards for medical society grievance or mediation committees are being developed by a special committee appointed by the A.M.A.'s Board of Trustees. A group of consultants—state executive secretaries, Rowland B. Kennedy of Mississippi; Harvey T. Sethman, Colorado, and John E. Farrell, Rhode Island—and several A.M.A. staff members currently are visiting some 25 state medical associations to collect information on grievance committee organization and operation. Those states not visited will receive a survey form which should be submitted to the committee if the society wishes its grievance committee program to be included in this study.

In addition, a special survey form will be sent to approximately 70 county medical societies. Personal visits also will be made to selected societies having a variety of types of grievance committees.

A.M.A. Plans Meeting On Health of Coal Miners

To explore ways of improving liaison between medical societies and area medical administrators of the UMWA Welfare and Retirement Fund, the American Medical Association will sponsor the Fourth Conference on Medical Care in the Bituminous Coal Mine Area this fall. The Conference will be held October 2 in Charleston, West Virginia, under the auspices of the Councils on Industrial Health and Medical Service. Representatives of the Liaison committees and offices of the UMWA Welfare and Retirement Fund of the five states in the country's principal coal mining areas have been invited to attend. A number of other states interested in these problems also will send representatives.

More Health Tips For TV Audiences

Before the doctor comes, "what to do" about a sore back, dizzy spells, or blotches on the skin is a familiar cry in every household. To help mother cope with such emergencies, the American Medical Association now presents the third series of six five-minute films entitled, "What To Do." Featuring Abby Lewis, noted Broadway-radio-television character actress, this series presents authentic health information on the following subjects: Eye Injury, Backache, Baseball Finger, Dizziness, Hay Fever, and Skin Problems. Series III now is available from the A.M.A.'s Film Library for use by local medical societies over local television stations.

ENDOCRINE SOCIETY

"Endocrinology and Metabolism" is the subject for the seventh annual postgraduate assembly of the Endocrine Society, being held September 26-October 1, at Indianapolis, with the cooperation of the Indiana University School of Medicine.

Continuation study facilities of the Indiana University Medical Center will be utilized for the sessions at which 21 leading clinicians and investigators will be heard.

Information regarding the program, registration, etc., is available by addressing: Postgraduate Office, Indiana University School of Medicine, 1100 West Michigan, Indianapolis 7, Indiana.

ASSOCIATION OF MILITARY SURGEONS

The Association of Military Surgeons of the United States will present a comprehensive three-day program on the medical problems facing the military services and the nation in an atomic war, according to an announcement by the Association President, Major General Joseph I. Martin, Chief Surgeon of the United States Army in Europe. General Martin said that the entire scientific and professional program of the sixty-second annual convention of the association, to be held at the Statler Hotel in Washington, D. C., on November 7, 8, and 9, this year, would be devoted to these problems.

General Martin said that the first afternoon session will discuss the medical effects of nuclear warfare, including the characteristics of nuclear explosions, and the injuries due to blast, heat, and radiation.

The entire second day's program will be devoted to the Principles of the Care of Mass Casualties. It will cover such important topics as protective measures; initial aid and rescue; sorting of casualties; emergency medical care; cost of delays in treatment; the treatment of large numbers of blast, thermal, radiation, and neuropsychiatric casualties; the use of drugs, blood, and anesthetics in dealing with mass casualties; and the public health, sanitation, and welfare problems in atomic attacks.

The third day will be given over to Organization for the Management of Mass Casualties. The program will discuss the roles to be played by physicians, dentists, veterinarians, nurses, Medical Service Corps officers, Women's Medical Specialist Corps officers, and technical assistants. It will propose ways and means to train these people for their roles in atomic warfare. Finally, the methods for organizing sorting facilities, transportation, fixed and field hospitals, and holding units, to deal with thousands of casualties at one time, will be presented.

General Martin said that each topic will be discussed by an expert in his field who has made a particular study of the medical problems in atomic warfare.

PAN AMERICAN ASSOCIATION OF OPHTHALMOLOGY

Eye physicians of North, Central and South America will join their efforts to prevent the tragedy of blindness when the Fifth Pan American Congress of Ophthalmology meets in Santiago, Chile, January 9-14, 1956.

Dr. Moacyr E. Alvaro, Sao Paulo, Brazil, president of the Pan American Association of Ophthalmology, has announced the following official subjects for discussion by panels comprised of physicians representing all the Americas: glaucoma, collagen diseases; infantile glaucoma; secondary glaucoma; strabismus; detachment of the retina; psychosomatic ophthalmology; tropical diseases of the eye; physiopathology and surgery of the crystalline lens; plastic surgery; visual fields and neuro-ophthalmology, and intraocular tumors. In addition, there will be a number of "free" papers on other topics.

Ophthalmologists who may desire further information about the program may consult Dr. James H. Allen, 1430 Tulane Avenue, New Orleans, Louisiana. Inquiries about other phases of the Congress may be addressed to Dr. Daniel Snyder, 109 North Wabash Avenue, Chicago 2, Illinois, who is acting secretary for countries north of Panama.

AMERICAN COLLEGE OF CHEST PHYSICIANS

The Council on Postgraduate Medical Education of the American College of Chest Physicians, in cooperation with the respective state chapters of the College, as well as the staffs and faculties of the local hospitals and medical schools of Chicago and New York City, will sponsor the following postgraduate courses on diseases of the chest this fall:

1. Tenth Annual Postgraduate Course, Hotel Knickerbocker, Chicago, Illinois, October 3-7, 1955
2. Eighth Annual Postgraduate Course, Park-Sheraton Hotel, New York City, November 14-18, 1955.

Our postgraduate courses endeavor to bring physicians up to date on recent advances in the diagnosis and treatment of heart and lung disease. Tuition is \$75 for each course, which includes round table luncheons.

Further information may be secured by writing to the Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

VETERANS ADMINISTRATION

Dr. Fred M. Patterson of Greensboro, North Carolina, a veteran of World War I, has been appointed examining physician, chief grade, in the Veterans Administration Regional Office in Columbia, South Carolina, and will assume his duties on or about August 15, 1955.

Born July 30, 1894, in Cabarrus County, Concord, N. C., Dr. Patterson moved to Greensboro in 1927 and has resided there since.

He is a director of the Greensboro Red Cross, past-president of the Kiwanis Club, past-president of the Guilford County Medical Society, and past-president of the Urological North Carolina Medical Society.

* * *

Dr. James R. Glotfelty, manager of the Veterans Administration Hospital at Lebanon, Pennsylvania, is being transferred in the same position to the VA hospital in Durham, North Carolina, VA has announced.

Dr. Glotfelty succeeds the late Dr. John J. Tyson, who died on May 27, 1955.

* * *

Long-term mental patients are being discharged as productive citizens through a new program of hospital job experience for pay, Veterans Administration announced recently. This program, VA said, is succeeding where all other methods have failed.

"The Month in Washington" will be found on page 390.

Classified Advertisements

Physician past middle age wishes position in industrial plant or as assistant in office of busy physician. Will locate in good small town for office or hospital work. No house calls. Prefer mountain section. Dr. M. S. Levy, Smyrna, Georgia.

STATE HOSPITAL AT BUTNER: Positions available for young active practitioners, psychiatric experience desirable, but not essential. Good living and working conditions. Please write in the first instance to The Medical Superintendent, State Hospital at Butner, Butner, North Carolina.

TRANSACTIONS

OF THE

MEDICAL SOCIETY

OF THE STATE OF NORTH CAROLINA

ONE HUNDRED FIRST ANNUAL SESSION

. . . held at . . .

PINEHURST, NORTH CAROLINA

MAY 2, 3 and 4, 1955

President, Zack D. Owens, M.D., Elizabeth City
 Secretary-Treasurer, Millard D. Hill, M.D., Raleigh
 Executive Secretary, James T. Barnes, Raleigh

INDEX TO REPORTS AND RESOLUTIONS

REPORTS

American Medical Education Foundation.....	323
Auditor	310
Boards:	
Roster Medical Examiners	294
Report of Medical Examiners	360
Committees	333-379
Constitution and By-Laws, Revision of	378
Councilors	321
Delegates	349
Executive Council Meetings	297
Report of	325
Executive Secretary	315
History of Society	286-288
President	308
Progress Report—Div. of Health Affairs, University of North Carolina	300
Secretary-Treasurer	310
Woman's Auxiliary.....	318

RESOLUTIONS AND OTHER BUSINESS

Banquet Session	383
Conjoint Session	385
General Sessions:	
First	379
Second	385
Third	387
House of Delegates Meetings:	
First on Monday Afternoon	308
First on Monday Evening	340
Second on Wednesday Afternoon	374
Officers, Election of	374

EARLY HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA FROM ORGANIZATION TO 1804

Date	Place	President	Vice Presidents	Corresponding Secretary	Secretary	Recording Secretary	Treasurer	Censors
Dec. 17, 1799, or April 16, 1800	Raleigh	Richard Fenner	Nathaniel Loomis John Claiborne	Calvin Jones		Wm. B. Hill	Cargill Massenburg	Sterling Wheaton James Webb Jas. John Pasteur Jason Hand
Dec. 1, 1800	Raleigh	Richard Fenner			Sterling Wheaton			
Dec. 1, 1801	Raleigh	John C. Osbore	Thomas Mitchell Richard Fenner	Calvin Jones	Sterling Wheaton		Cargill Massenburg	James Webb John Sibley
1802	Raleigh	John C. Osborne		Calvin Jones				
1803	Raleigh	John C. Osborne		Calvin Jones				
1804	Raleigh	John C. Osborne		Calvin Jones				

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA FROM 1849 TO 1955

*Missing Data Not to be Found in Record

Date	Place of Meeting	Number in Attendance	President	Vice Presidents*	Secretary	Treasurer*	Members on Roll*	Honorary Members*	Honorary Fellows*
1849	Raleigh	25	F. J. Hill		W. H. McKee		25		
1 1850	Raleigh	21	E. Strudwick	F. J. Haywood, C. E. Johnson, J. E. Williamson, W. G. Thomas	W. H. McKee	W. G. Hill	38	9	
2 1851	Raleigh	23	E. Strudwick	C. E. Johnson	W. H. McKee	W. G. Hill	46	0	
3 1852	Wilmington	38	J. E. Williamson	Thomas N. Cameron, William G. Hill, Johnston B. Jones, N. J. Pittman	E. B. Haywood	J. J. W. Tucker	72	12	
4 1853	Fayetteville	24	J. E. Williamson	William G. Hill, Johnston B. Jones, J. B. G. Myers, N. J. Pittman	W. W. Harris	Daniel Dupree	80	14	
5 1854	Raleigh	37	J. H. Dickson	N. J. Pittman, J. B. G. Myers, J. Graham Tull, A. D. McLean	S. S. Satchwell	Daniel Dupree	84	17	
6 1855	Salisbury	23	J. H. Dickson	J. Graham Tull, Owen Hadley, A. D. McLean, Hugh Kelly	S. S. Satchwell	J. B. Dunn	96	18	
7 1856	Raleigh	35	C. E. Johnson	Marcellus Whitehead, E. R. Gibson, Johnstoe B. Jones, O. F. Manson	S. S. Satchwell	J. B. Dunn	101	22	
8 1857	Edenton	25	C. E. Johnson	Marcellus Whitehead, O. F. Manson, H. W. Faison, E. T. Gibson	W. G. Thomas	J. B. Dunn	113	16	
9 1858	New Bern	69	W. H. McKee	Edward Warren, C. W. Graham, Caleb Winslow, A. B. Pierce	W. G. Thomas	J. B. Dunn	172	18	
10 1859	Statesville	81	W. H. McKee	James G. Ramsey, P. E. Hines, J. R. Mercer, W. T. Howard	W. G. Thomas	C. W. Graham			
11 1860	Washington	64	N. J. Pittman	P. T. Henry, R. H. Winborne, M. Whitehead, T. S. Leach	W. G. Thomas	C. W. Graham	233	18	
12 1861	Morganton	23	N. J. Pittman	J. J. Summerell, C. T. Murphy, G. W. Hodges, W. A. B. Norcom	W. G. Thomas	C. W. Graham	244	18	
13 1866	Raleigh	20	J. J. Summerell	E. Burke Haywood, R. H. Winborne, W. L. Barrow, J. W. Jones	W. G. Thomas	C. W. Graham			
14 1867	Tarboro	41	W. G. Thomas		S. S. Satchwell	C. W. Graham	288	11	
15 1868	Warrenton	27	S. S. Satchwell	Hugh Kelly, George A. Foote, Charles J. O'Hagan, J. H. Baker	Thomas F. Wood	J. W. Jones			
16 1869	Salisbury	36	E. B. Haywood	Thomas E. Wilson, A. B. Pierce, C. T. Murphy, M. A. Locke	Thomas F. Wood	J. W. Jones			
17 1870	Wilmington	38	C. J. O'Hagan	E. A. Anderson, F. N. Luckey, W. R. Sharpe, R. L. Payne	Thomas F. Wood	J. W. Jones			
18 1871	Raleigh	35	Hugh Kelley	D. N. Patterson, R. C. Pearson, J. B. Seavy, G. L. Kirby	Thomas F. Wood	J. W. Jones			
19 1872	New Bern	34	W. G. Hill	H. W. Faison, R. I. Hicks, G. H. Macon, W. A. B. Norcom	James McKee	J. W. Jones			
20 1873	Statesville	43	M. Whitehead	W. T. Ennett, William Little, Charles Duffy, P. T. Jerman	James McKee	H. T. Bahnson			
21 1874	Charlotte	56	W. A. B. Norcom	J. B. Jones, R. F. Lewis, C. G. Cox, J. L. Knight	James McKee	H. T. Bahnson			
22 1875	Wilson	60	J. W. Jones	Walker Debnam, J. A. Gibson, William Little, D. N. Patterson	James McKee	H. T. Bahnson	148	5	
23 1876	Fayetteville	33	Peter E. Hines	J. H. Baker, G. G. Smith, T. D. Haigh, J. K. Hall	James McKee	H. T. Bahnson	157	4	
24 1877	Salem	42	George A. Foote	J. K. Hall, B. W. Robinson, A. Holmes, A. A. Hill	James McKee	A. G. Carr	177	4	
25 1878	Goldsboro	79	R. L. Payne	E. M. Rountree, Richard Anderson, S. B. Flowers, L. A. Stith	L. J. Picot	A. G. Carr	194	6	
26 1879	Greensboro	109	Chas. Duffy, Jr.	J. A. Gibson, Willis Alston, James McKee, A. A. Hill	L. J. Picot	A. G. Carr	198	6	
27 1880	Wilmington	105	J. F. Shaffner	J. K. Hall, W. C. McDuffie, W. M. Wilson, R. F. Lewis	L. J. Picot	A. G. Carr	225	6	
28 1881	Asheville	92	R. B. Haywood	J. E. McKee, W. H. Lilly, R. H. Speight, W. J. H. Bellamy	L. J. Picot	A. G. Carr	254	6	
29 1882	Coccord	65	Thos. F. Wood	T. J. Moore, D. J. Cain, S. E. Evans, John McDonald	L. J. Picot	A. G. Carr	297	7	
30 1883	Tarboro	112	J. K. Hall	A. W. Knox, J. M. Hadley, E. S. Foster, John Whitehead	L. J. Picot	A. G. Carr	310	7	
31 1884	Raleigh	112	A. B. Pierce	F. W. Potter, G. W. Graham, R. Dillard, G. W. Long	L. J. Picot	A. G. Carr	348	7	
32 1885	Durham	173	W. C. McDuffie	James McKee, T. E. Anderson, W. H. Whitehead, A. G. Carr	W. C. Murphy	R. L. Payne, Jr.	424	6	

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA FROM 1849 TO 1955—Continued

*Missing Data Not to be Found in Record

Date	Place of Meeting	Number in Attendance	President	Vice Presidents	Secretary	Treasurer	Members on Roll July 15	Honorary Members	Honorary Fellows*
33 1886	New Bern	113	Joseph Graham	H. F. Bahnsen, L. J. Picot, J. L. McMillan, W. W. Faison	J. M. Baker	R. L. Payne, Jr.	438	7	
34 1887	Charlotte	112	H. T. Bahnsen	G. G. Smith, J. L. Nicholson, C. M. Van Poole, H. B. Ferguson	J. M. Baker	R. L. Payne, Jr.	452	7	
35 1888	Fayetteville	133	F. D. Haigh	W. T. Ennett, J. A. Dunn, T. E. Anderson	J. M. Baker	C. M. Van Poole	306	6	
36 1889	Elizabeth City	50	W. T. Ennett	W. J. Jones, S. W. Stevenson, G. W. Long	J. M. Baker	C. M. Van Poole	410	6	
37 1890	Oxford	160	G. G. Thomas	R. L. Payne, Jr., Richard Dillard, S. D. Booth	J. M. Hays	C. M. Van Poole	414	6	
38 1891	Asheville	135	R. H. Lewis	S. W. Battle, J. L. Nicholson, W. H. Lilly	J. M. Hays	C. M. Van Poole	422	6	
39 1892	Wilmington	162	W. T. Cheatham	F. S. Burbank, J. W. Long, W. H. H. Cobb, W. D. Hilliard	J. M. Hays	C. M. Van Poole	431	6	
40 1893	Raleigh	221	J. W. McNeill	W. C. Galloway, H. H. Harris, J. M. Hadley, Thomas Hill	R. D. Jewett	M. P. Perry	447	5	3
41 1894	Greensboro	166	W. H. H. Cobb	J. A. Hodges, R. W. Tate, Willis Alston, M. H. Fletcher	R. D. Jewett	M. P. Perry	454	5	3
42 1895	Goldsboro		J. H. Tucker	J. Howell Way, W. H. Harrell, O. McLaughlin, C. A. Misenheimer	R. D. Jewett	M. P. Perry	436	7	3
43 1896	Winston-Salem	158	R. L. Payne	S. D. Booth, J. P. Munroe, J. A. Burroughs, J. E. Grimsley	R. D. Jewett	M. P. Perry	452	7	3
44 1897	Morehead City	103	P. L. Murphy	J. C. Watton, A. A. Kent, M. R. Adams, B. L. Long	R. D. Jewett	M. P. Perry	406	6	3
45 1898	Charlotte	*	Francis Duffy	E. C. Register, A. T. Cotton, J. H. B. Knight, F. H. Russell	R. D. Jewett	M. P. Perry	437	6	21
46 1899	Asheville	152	L. J. Picot	I. W. Faison, J. W. White, H. H. Dodson, W. C. Brownson	Geo. W. Presley	G. T. Sikes	489	6	16
47 1900	Tarboro	115	George W. Long	C. M. Van Poole, James M. Parrott, T. B. Williams, W. D. Hilliard	Geo. W. Presley	G. T. Sikes	482	6	21
48 1901	Durham	186	Julian M. Baker	M. H. Fletcher, C. A. Julian, D. A. Stanton, E. M. Summerell	Geo. W. Presley	G. T. Sikes	515	5	18
49 1902	Wilmington	147	Robert S. Young	A. G. Carr, E. D. Dixon-Carroll, I. M. Taylor, J. M. Parrott	Geo. W. Presley	G. T. Sikes	546	5	20
50 1903	Hot Springs	155	A. W. Knox	E. G. Moore, C. A. Julian, W. W. McKenzie, J. L. Nicholson	J. Howell Way	G. T. Sikes	530	6	19
51 1904	Raleigh	32*	H. B. Weaver	John Hey Williams, John C. Rodman, S. F. Pfohl	J. Howell Way	G. T. Sikes	1,033	8	17
52 1905	Greensboro	361	David T. Tayloe	C. A. Julian, John F. Burns, I. W. Faison	J. Howell Way	G. T. Sikes	1,175	8	17
53 1906	Charlotte	406	E. C. Register	L. B. McBrayer, W. H. Cobb, Jr., W. O. Spencer	J. Howell Way	G. T. Sikes	1,234	8	16
54 1907	Morehead City	217	Samuel D. Booth	C. M. Strong, J. E. McLaughlin, W. F. Hargrove	David A. Stanton	H. McK. Tucker	888	7	16
55 1908	Winston-Salem	372	J. Howell Way	J. E. Stokes, J. A. Turner, W. H. Dixon	David A. Stanton	H. McK. Tucker	998	7	28
56 1909	Asheville	337	J. F. Highsmith	C. M. Van Poole, D. A. Garrison, D. O. Dees	David A. Stanton	H. McK. Tucker	1,067	7	23
57 1910	Wrightsville Beach	276	J. A. Burroughs†	E. J. Wood, John Q. Myers, L. D. Wharton	David A. Stanton	H. D. Walker	1,050	8	35
58 1911	Charlotte	412	C. M. Van Poole	J. V. McGougau, W. E. Warren, L. N. Glenn	David A. Stanton	H. D. Walker	880	8	45
59 1912	Hendersonville	296	A. A. Kent	J. P. Monroe, W. P. Horton, J. G. Murphy	David A. Stanton	H. D. Walker	950	8	44
60 1913	Morehead City	232	J. P. Munroe	F. R. Harris, E. S. Bullock, L. B. Morse	John A. Ferrell	H. D. Walker	1,133	8	40
61 1914	Raleigh	431	J. M. Parrott	E. T. Dickinson, J. T. J. Battle, D. E. Sever	John A. Ferrell	H. D. Walker	1,228	8	47
62 1915	Greensboro	443	L. B. McBrayer	J. J. Phillips, C. W. Moseley, S. M. Crowell	John A. Ferrell	H. D. Walker	1,221	9	68
63 1916	Durham	406	M. H. Fletcher	J. L. Nicholson, L. N. Glenn, W. H. Hardison	Benj. K. Hays	W. M. Jones	1,228	10	79
64 1917	Asheville	280	Charles O'H. Laughinghouse	D. J. Hill, J. L. Spruill, J. H. Shuford	Benj. K. Hays	W. M. Jones	1,271	11	81
65 1918	Pinehurst	291	I. W. Faison	Wm. deB. MacNider, Jos. B. Greene, Ben F. Royal	Benj. K. Hays	W. M. Jones	1,087	11	81
66 1919	Pinehurst	335	Cyrus Thompson	J. W. Halford, T. W. Davis, A. McN Blair	Sec.-Treas. Benj. K. Hays	Acting Sec.-Treas. L. B. McBrayer	1,306	11	100
67 1920	Charlotte	479	C. V. Reynolds	H. D. Walker, F. Stanley Whitaker, Thos. I. Fox	Benj. K. Hays	L. B. McBrayer	1,497	12	100
68 1921	Pinehurst	404	T. E. Anderson	C. S. Lawrence, W. H. Ward, J. M. Maunog	Benj. K. Hays	L. B. McBrayer	1,491	12	93
69 1922	Winston-Salem	507	H. A. Royster	W. T. Parrott, B. C. Nalle, J. R. McCracken		Sec.-Treas. L. B. McBrayer	1,571	12	109
70 1923	Asheville	356	J. W. Long	F. M. Hanes, T. C. Johnson, B. L. Long		L. B. McBrayer	1,592	9	101
71 1924	Raleigh	525	J. V. McGougau	J. L. Spruill,† Eugene B. Glenn, D. A. Garrison		L. B. McBrayer	1,604	9	106
72 1925	Pinehurst	550	Albert Anderson	W. L. Dunn, A. E. Bell, K. G. Averitt		L. B. McBrayer	1,657	10	116
73 1926	Wrightsville Beach	445	Wm. deB. MacNider	J. P. Matheson, W. W. Dawson, H. H. Bass		L. B. McBrayer	1,663	10	107
74 1927	Durham	653	John Q. Myers	J. W. Carroll, A. Y. Livville, C. H. Cocke		L. B. McBrayer	1,691	10	121
75 1928	Pinehurst	611	John T. Burrus	G. H. Macon, R. F. Leibach, W. R. Griffin		L. B. McBrayer	1,738	11	143
76 1929	Greensboro	671	Thurman D. Kitchin	W. L. Dunn,† Asheville, D. T. Tayloe, Jr., Washington, W. D. James, Hamlet		L. B. McBrayer	1,666	11	146
77 1930	Pinehurst	701	L. A. Crowell	W. B. Murphy, Wm. E. Warren, N. B. Adams		L. B. McBrayer	1,711	11	155

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA FROM 1849 TO 1955—Continued

Date	Place of Meeting	Number in Attendance	President	President-Elect	Vice Presidents	Sec.-Treas.	Members on Roll July 15	Honorary Members	Honorary Fellows
78 1931	Durham.....	714	J. G. Murphy.....	M. L. Stevens.....	C. A. Julian, Greensboro J. W. Davis, Statesville.....	L. B. McBrayer.....	1,600	10	164
79 1932	Winston-Salem.....	740	M. L. Stevens.....	Jno. B. Wright.....	C. W. Banner, Greensboro W. W. Sawyer, Elizabeth City.....	L. B. McBrayer.....	1,559	10	166
80 1933	Raleigh.....	714	Jno. B. Wright.....	I. H. Manning.....	J. R. McCracken, Waynesville.....	L. B. McBrayer.....	1,363	10	181
81 1934	Pinehurst.....	728	I. H. Manning.....	P. P. McCain.....	W. G. Suiter, Weldon R. L. Felts, Durham.....	L. B. McBrayer.....	1,563	10	210
82 1935	Pinehurst.....	706	P. P. McCain.....	Paul H. Ringer.....	H. D. Walker, Elizabeth City J. F. McKay, Buie's Creek William Allan, Charlotte.....	L. B. McBrayer.....	1,619	10	215
83 1936	Asheville.....	583	Paul H. Ringer.....	C. F. Strosnider.....	J. K. Pepper, Winston-Salem E. S. Bulluck, Wilmington.....	L. B. McBrayer.....	1,462	10	235
84 1937	Winston-Salem.....	767	C. F. Strosnider.....	Wingate M. Johnson.....	C. A. Woodard, Wilson Jno. F. Brownberger, Fletcher.....	L. B. McBrayer.....	1,503	7	253
85 1938	Pinehurst.....	02	Wingate M. Johnson.....	J. Buren Sidbury.....	R. B. McKnight, Charlotte J. F. Abel, Waynesville.....	T. W. M. Long.....	1,715	7	284
86 1939	Cruise to Bermuda.....	19	J. Buren Sidbury.....	William Allan.....	C. B. Williams, Elizabeth City M. D. Hill, Raleigh.....	T. W. M. Long.....	1,605	8	313
87 1940	Pinehurst.....	835	William Allan.....	Hubert B. Haywood.....	F. Webb Griffith, Asheville Frank C. Smith, Charlotte.....	T. W. M. Long (1) I. H. Manning.....	1,661	7	311
88 1941	Pinehurst.....	755	Hubert B. Haywood.....	F. Webb Griffith.....	D. W. Holt, Greensboro T. C. Kerns, Durham.....	Roscoe D. McMillan.....	1,837	8	350
89 1942	Charlotte.....	710	F. Webb Griffith.....	Donnel B. Cobb.....	Thos. Del. Sparrow, Charlotte T. L. Carter, Gatesville.....	Roscoe D. McMillan.....	1,919	8	361
90 1943	Raleigh.....	736	Donnel B. Cobb.....	James W. Vernon.....	George S. Coleman, Raleigh Julian Moore, Asheville.....	Roscoe D. McMillan.....	1,982	8	363
91 1944	Pinehurst.....	760	James W. Vernon.....	Paul F. Whitaker.....	Fred C. Hubbard, North Wilkesboro George L. Carrington, Burlington.....				
1945	No meeting because of O.D.T. restrictions		Paul F. Whitaker.....	Oren Moore.....	Wm. H. Smith, Goldsboro Zack D. Owens, Elizabeth City.....	Roscoe D. McMillan.....	1,811	7	383
92 1946	Pinehurst.....	889	Oren Moore.....		Wm. H. Smith, Goldsboro Zack D. Owens, Elizabeth City.....	Roscoe D. McMillan.....	1,939	6	377
93 1947	Virginia Beach, Va.....	444	Wm. M. Coppridge.....	Frank A. Sharpe.....	G. E. Bell, Wilson J. B. Bullitt, Chapel Hill.....	Roscoe D. McMillan.....	2,191	7	404
94 1948	Pinehurst.....	920	Frank A. Sharpe (2).....	James F. Robertson.....	V. K. Hart, Charlotte J. G. Raby, Tarboro.....	Roscoe D. McMillan.....	2,298	8	407
95 1949	Pinehurst.....	998	James F. Robertson.....	G. Westbrook Murphy.....	Joseph J. Combs, Raleigh Joseph A. Elliott, Charlotte.....	Roscoe D. McMillan.....	2,318	5	405
96 1950	Pinehurst.....	947	G. Westbrook Murphy.....	Roscoe D. McMillan.....	Ben F. Royal Joseph A. Elliott.....	Millard D. Hill.....	2,283	5	455
97 1951	Pinehurst.....	938	Roscoe D. McMillan.....	Frederic C. Hubbard.....	Joseph A. Elliott Henderson Irwin.....	Millard D. Hill.....	2,341	5	469
98 1952	Pinehurst.....	969	Frederic C. Hubbard.....	J. Street Brewer.....	Forest M. Houser Arthur Daughtridge.....	Millard D. Hill.....	2,326	5	476
99 1953	Pinehurst.....	1016	J. Street Brewer.....	Joseph A. Elliott.....	George W. Paschal John R. Bender.....	Millard D. Hill.....	2,673	5	486
100 1954	Pinehurst.....	1077	Joseph A. Elliott.....	Zack D. Owens.....	John F. Foster Julian A. Moore.....	Millard D. Hill.....	2,801	6	486
101 1955	Pinehurst.....	991	Zack D. Owens.....	J. P. Rousseau.....	George W. Paschal, Jr. Elias S. Faison.....	Millard D. Hill.....	2,896	6	507

†Died during his term of office; succeeded by E. J. Wood, first vice president.

(2) Died during term of office; succeeded by James F. Robertson, president-elect.

‡Died during term of office.

(1) Died during term of office; succeeded by I. H. Manning

STATUS OF SOCIETY MEMBERSHIP BY COUNTIES FOR YEARS 1930-1955

COUNTY	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
Alamance-Caswell	33	33	32	29	32	30	31	30	27	34	35	35	42	41	43	38	43	36	39	40	39	39	54	58	59	62
Alexander 1																										
Allegany 2	6	6	4	4	9	7	8	7	6	11	10	10	9	10	9	9	9	10	10	11	10	10	11	10	10	11
Anne 3	6	5	4																							
Ashe-Watauga	6	6	5		5	5	5	5	6	4	5	5	6	7	9	8	6	7	17	17	15	15	15	16	18	22
Avery 4	18	15	15	12	13	13	10	9	11	12	13	13	14	13	13	12	13	16	19	19	15	15	15	19	16	15
Beaufort	7	9	7	8	9	11	9	8	7	7	7	7	7	7	7	6	6	7	6	5	5	5	7	7	10	10
Bladen	8	8	8	5	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	6	6	6	8	10	10	11
Brunswick	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Bucumbe	113	112	105	83	107	115	106	98	103	111	108	90	97	115	128	121	124	145	162	154	139	139	132	154	162	159
Burke	17	17	17	17	12	10	13	18	17	18	22	22	21	23	25	8	24	32	36	33	26	27	32	34	38	35
Cabarrus	23	20	20	10	14	21	8	11	11	12	15	16	27	28	34	26	29	40	41	40	37	39	44	42	51	47
Caldwell	15	14	12	9	12	12	12	13	15	18	17	17	17	17	20	18	19	16	21	21	20	20	25	25	23	23
Candler 5																										
Carteret	12	12	12	12	12	11	12	10	2	3	2	4	6	6	8	4	9	11	13	13	14	14	14	15	16	16
Caswell 6	13	13	16	8	16	16	16	14	19	19	15	13	21	19	24	11	23	25	32	32	32	32	27	37	38	42
Catawba	9	4	3	2	3	2	0	1	3	6	4	6	7	7	7	3	3	7	8	6	4	4	4	10	10	10
Chatham	10	9	8	5	8	8	8	7	5	5	3	10	14	12	12	12	13	12	12	11	7	7	9	8	8	9
Cherokee	8	6	7	6	7	5	4	2	2	2	1	1	1	1	5	5	9	11	11	11	11	11	7	8	10	11
Chowan-Perquimans																										
Clay 7	23	19	22	21	20	21	22	21	25	23	27	28	30	30	28	27	28	32	33	28	33	38	36	37	42	37
Cleveland	13	10	8	9	10	11	10	7	9	16	18	15	17	18	18	32	15	14	20	20	18	18	16	19	19	20
Columbus	13	13	14	9	5	10	6	6	8	7	7	11	12	14	10	11	14	22	26	17	15	16	13	20	23	26
Craven	26	23	21	27	27	27	21	24	24	22	22	13	27	25	27	13	23	29	27	28	31	40	42	41	41	46
Cumberland	8	1	1																							
Currituck 8																										
Dare 5	16	17	17	17	20	23	19	24	18	17	26	31	29	29	30	29	29	31	33	35	37	38	33	36	36	37
Davidson	5	15	6	4	2	1	2	1	4	9	10	12	12	12	11	6	9	13	11	8	8	8	9	10	13	13
Davie 9	9	11	7	7	8	8	8	8	10	11	10	12	12	13	13	138	133	152	154	151	156	172	152	217	231	261
Dubin	67	76	77	76	76	46	39	33	31	30	48	40	37	48	54	52	45	57	55	50	57	57	53	55	51	58
Durham-Orange	10	43	39	23	46	40	39	33	31	30	48	40	37	48	54	52	45	57	55	50	57	57	53	55	51	58
Edgemont-Nash	70	66	67	72	73	77	77	73	83	82	93	92	115	122	123	129	126	129	135	159	147	184	150	173	176	180
Forsyth	30	9	9	9	9	9	9	9	6	3	3	3	48	44	5	2	4	4	5	5	3	3	10	10	8	10
Franklin	36	36	37	12	28	30	21	28	3	35	35	41	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Gaston	2	2	2	2	2	2	2	2	2	2	1	1	3	3	3	3	3	3	2	2	1	2	2	2	2	2
Gates																										
Graham	13	13	12	10	10	11	10	11	13	13	14	14	14	14	14	12	14	13	12	12	12	12	13	17	16	3
Greene	15	15	15	6	9	6	5	6	6	6	5	6	7	6	6	6	6	4	6	4	4	4	3	3	3	3
Gulfport	124	124	118	91	102	99	83	109	103	108	110	113	127	133	135	134	129	151	158	166	166	187	160	196	198	199
Halifax	16	15	14	13	15	16	14	15	10	12	12	16	18	19	19	25	25	23	23	23	22	23	25	29	32	33
Harnett	14	13	15	16	14	15	10	16	12	12	16	18	19	19	19	19	19	16	19	19	18	18	17	19	13	20
Henderson	14	12	13	15	20	19	21	22	21	21	19	21	20	20	20	19	16	21	20	17	17	20	21	25	22	23
Hertford	19	14	12	13	15	17	17	13	14	17	133	10	7	17	17	17	20	21	23	23	21	21	19	22	30	31
Hoke	5	5	5	6	7	7	4	6	7	7	1	6	6	8	8	2	6	6	6	6	7	10	10	13	14	16
Hyde	14	14	11	13	14	13	11	10	10	10	10	11	9	9	10	10	10	10	9	11	11	11	11	12	15	13
Irish	1	1	1	1	1	18																				
Jackson-Alexander	6	8	39	29	38	3	39	30	31	25	27	24	23	26	26	10	19	28	32	34	29	30	36	42	50	49
Jackson 10																										
Jackson-Swain																										
Johnston	23	25	40	19	19	21	12	9	27	25	24	18	18	22	23	19	22	26	26	29	11	12	15	15	14	14
Jones	3	3	3	3	3	3	3	2	1																	
Lee	13	11	13	10	10	10	3	8	10	9	10	11	12	11	12	12	13	13	16	16	15	15	16	18	17	1
Lenoir	22	17	19	20	20	22	22	21	22	21	25	24	26	27	27	27	25	29	32	33	27	23	35	37	36	3
Lincoln	10	10	12	12	13	11	11	11	11	11	14	15	15	15	14	10	15	14	14	15	14	14	13	14	12	12
Macon-Clay	8	4	3	2	5	3	5	4	2	4	1	4	1	1	4	3	3	7	7	5	6	8	7	10	9	9
Madison	5	3	4	5	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Martin	8	7	4																							
Martin-Washington																										
Tyrell	12	10	10	11	10	13	10	6	10	12	13	14	13	12	13	13	15	14	14	12	10	10	10	11	13	15
McDowell	128	124	117	104	108	116	116	125	119	119	130	138	127	131	142	150	161	175	184	193	198	198	188	229	231	252
Mecklenburg																										
Mitchell 12																										

STATUS OF MEMBERSHIP BY COUNTIES—Continued

COUNTY	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
Mitchell-Avery 13	6	5	5	8																						
Mitchell-Watauga 14	9	10	9	7	9	9	18	7	3	6	4	5	7	5	4	3	5	4	7	10	13	10	10	10	10	10
Montgomery 15	17	21	21	18	22	21	19	22	21	20	19	17	22	21	21	20	22	23	26	26	28	28	26	29	33	35
Nash 16	33	37	35	25	35	39	34	36	32	39	37	35	43	44	45	40	49	55	62	62	56	56	63	65	68	69
New Hanover	3	4	5	4	8	4	4	4	9	4	3	7	4	4	4	3	2	3	4	4	4	4	3	5	4	3
Northampton	5	5	8	6	6	5	2	5	4	4	3	5	8	8	8	8	8	10	10	10	12	11	1	10	10	10
Orange 17	4	4	4	4	4	4	4	4	4	4	4	3	3	3	4	5	4	4	4	4	4	4	4	4	5	5
Pamlico																										
Pasquotank-Camden																										
Currituck-Dare																										
Pasquotank-Camden	17	14	11	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	2	1	1	1	1
Pender	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Perquimans 18	6	6	6	7	7	8	7	7	8	8	9	8	8	9	8	6	6	6	6	6	8	7	9	9	9	9
Person	27	27	20	14	22	26	24	26	30	29	28	25	29	30	31	32	30	31	32	29	31	31	28	34	40	43
Pitt	6	5	7	7	6	6	4	5	5	5	6	6	6	6	7	7	6	7	5	5	5	4	5	6	6	8
Polk	8	7	14	10	11	13	10	9	11	13	13	12	13	14	14	16	16	20	16	19	23	20	21	26	24	28
Richmond	17	17	15	16	15	16	15	17	16	15	16	16	15	17	17	16	18	19	20	15	15	15	15	18	23	21
Robeson	24	21	22	23	25	27	28	29	34	33	35	35	35	36	38	38	40	47	47	45	45	45	42	42	44	48
Rockingham	24	24	21	22	23	24	24	24	24	24	27	34	33	33	33	33	33	33	33	31	30	30	30	32	32	37
Rowan-Davie	35	39	33	24	34	30	27	28	26	24	27	34	33	33	33	33	33	33	33	31	30	30	30	32	32	37
Rutherford	22	21	21	19	20	21	23	22	23	23	24	22	22	22	23	22	20	24	25	24	21	21	25	25	24	25
Sampson	13	13	14	14	14	14	14	16	16	16	16	18	16	15	15	16	16	16	16	14	15	15	18	14	14	14
Scotland	10	11	11	11	11	11	10	11	11	10	10	10	10	9	10	10	9	12	10	13	13	13	14	14	14	14
Stanly 15	16	15	13	12	16	17	18	19	18	20	16	17	20	20	17	16	18	21	26	26	22	22	24	25	26	29
Stokes	2	6	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Surry 19	20	13	17	12	25	22	17	15	14	12	18	16	19	23	27	27	27	29	31	32	29	29	23	28	28	28
Swain	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Transylvania	2	2	1	3	2	2	2	2	2	2	1	2	8	10	9	7	7	6	6	4	4	7	8	7	10	11
Tyrrell 20	13	10	9	10	10	11	10	8	11	13	13	13	15	14	14	14	13	14	14	14	15	15	16	17	15	15
Union	12	8	7	8	9	9	8	8	6	10	10	10	10	10	10	8	11	11	12	12	11	11	12	13	14	15
Vance	94	87	86	87	89	88	89	95	100	95	94	93	87	98	96	96	92	110	108	114	120	126	114	146	152	147
Wake	6	6	6	5	5	6	2	2	2	2	3	2	3	4	5	2	6	6	5	6	6	6	5	7	8	9
Warren	3	3	3																							
Washington-Tyrrell 11																										
Watauga 21																										
Watauga-Ashe 22																										
Wayne	38	30	32	32	27	29	27	29	30	31	34	33	35	38	38	37	37	38	37	37	37	37	38	41	37	30
Wilkes 2	10	11	10																							
Wilkes-Alleghany																										
Wilson	28	28	22	9	13	10	14	13	14	15	13	16	17	17	17	14	16	17	17	18	18	19	17	17	18	21
Yadkin 19	10	10	4	1	25	29	31	25	25	24	25	27	27	31	29	27	30	33	33	35	28	28	30	34	34	37
Yancey	4	1	1	1	5	4	1	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Totals	1,694	1,600	1,559	1,363	1,563	1,619	1,462	1,503	1,715	1,605	1,661	1,694	1,837	1,919	1,982	1,811	1,459	2,151	2,298	2,318	2,275	2,343	2,326	2,673	2,801	2,896

(1) See Iredell-Alexander. (2) See Wilkes-Alleghany. (3) See Watauga-Ashe and Ashe-Watauga. (4) See Mitchell-Avery. (5) See Pasquotank-Camden-Dare and Pasquotank-Camden-Currituck-Dare. (6) See Alamance-Caswell. (7) See Macon-Clay. (8) See Pasquotank-Camden-Currituck-Dare. (9) See Rowan-Davie. (10) See Jackson-Swan. (11) See Martin-Washington-Tyrrell. (12) See Mitchell-Avery, Mitchell-Watauga, and Mitchell-Yancey. (13) See Avery and Mitchell. (14) See Mitchell, Watauga-Ashe, and Ashe-Watauga. (15) See Stanly-Montgomery, Montgomery, and Stanly. (16) See Edgecombe-Ashe. (17) See Durham-Orange. (18) See Chowan-Perquimans. (19) See Surry-Yadkin. (20) See Washington-Tyrrell and Martin-Washington-Tyrrell. (21) See Mitchell-Watauga, Watauga-Ashe, and Ashe-Watauga. (22) See Ashe-Watauga.

ROSTER OF MEMBERS OF NORTH CAROLINA STATE BOARD OF HEALTH FROM ORGANIZATION IN 1877 TO 1955

Name	Address	Appointed by	Term
S. S. Satchwell, M.D., President.....	Rocky Point.....	State Society.....	1877 to 1878
Thomas F. Wood, M.D., Secretary.....	Wilmington.....	State Society.....	1877 to 1878
Joseph Graham, M.D.....	Charlotte.....	State Society.....	1877 to 1878
Charles Duffy, Jr., M.D.....	New Bern.....	State Society.....	1877 to 1878
Peter E. Hines, M.D.....	Raleigh.....	State Society.....	1877 to 1878
George A. Foote, M.D.....	Warrenton.....	State Society.....	1877 to 1878
S. S. Satchwell, M.D., President.....	Rocky Point.....	State Society.....	1878 to 1884
Thomas F. Wood, M.D., Secretary.....	Wilmington.....	State Society.....	1878 to 1884
Charles J. O'Hagan, M.D., President.....	Greenville.....	State Society.....	1878 to 1882
George A. Foote, M.D.....	Warrenton.....	State Society.....	1878 to 1882
Marcellus Whitehead, M.D.....	Salisbury.....	State Society.....	1878 to 1880
R. L. Payne, M.D.....	Lexington.....	State Society.....	1878 to 1880
H. G. Woodfin, M.D.....	Franklin.....	Gov. Z. B. Vance.....	1878 to 1880
A. R. Ledoux, Chemist.....	Chapel Hill.....	Gov. Z. B. Vance.....	1878 to 1880
William Cain, Civil Engineer.....	Charlotte.....	Gov. Z. B. Vance.....	1878 to 1880
R. L. Payne, M.D.....	Lexington.....	State Society.....	1881 to 1887
M. Whitehead, M.D., President.....	Salisbury.....	State Society.....	1881 to 1884
S. H. Lyle, M.D.....	Franklin.....	Gov. T. J. Jarvis.....	1881 to 1883
William Cain, Civil Engineer.....	Charlotte.....	Gov. T. J. Jarvis.....	1881 to 1883
W. G. Simmons, Chemist.....	Wake Forest.....	Gov. T. J. Jarvis.....	1881 to 1883
J. W. Jones, M.D., President.....	Wake Forest.....	State Society.....	1883 to 1889
John McDonald, M.D.....	Washington.....	State Society.....	1883 to 1889
S. H. Lyle, M.D.....	Franklin.....	Gov. T. J. Jarvis.....	1883 to 1885
W. G. Simmons, Chemist.....	Wake Forest.....	Gov. T. J. Jarvis.....	1883 to 1885
Arthur Winslow, Civil Engineer.....	Raleigh.....	Gov. T. J. Jarvis.....	1884 to 1886
R. H. Lewis, M.D.....	Raleigh.....	State Board of Health.....	1884 to 1886
Thomas F. Wood, M.D., Secretary.....	Wilmington.....	State Society.....	1885 to 1887
William D. Hilliard, M.D.....	Asheville.....	State Society.....	1885 to 1891
Arthur Winslow, Civil Engineer.....	Raleigh.....	Gov. A. M. Scales.....	1885 to 1891
W. G. Simmons, Chemist.....	Wake Forest.....	Gov. A. M. Scales.....	1885 to 1887
J. H. Tucker, M.D.....	Henderson.....	Gov. A. M. Scales.....	1885 to 1887
R. H. Lewis, M.D., Secretary.....	Raleigh.....	State Society.....	1887 to 1888
H. T. Bahnson, M.D., President.....	Winston.....	State Society.....	1887 to 1888
Arthur Winslow, Civil Engineer.....	Raleigh.....	Gov. A. M. Scales.....	1887 to 1889
W. G. Simmons, Chemist.....	Wake Forest.....	Gov. A. M. Scales.....	1887 to 1889
J. H. Tucker, M.D.....	Henderson.....	Gov. A. M. Scales.....	1888 to 1891
J. L. Ludlow, Civil Engineer.....	Winston.....	Gov. A. M. Scales.....	1888 to 1891
J. H. Tucker, M.D.....	Henderson.....	Gov. D. G. Fowle.....	1888 to 1891
F. P. Venable, Ph.D., Chemist.....	Chapel Hill.....	Gov. D. G. Fowle.....	1889 to 1893
J. L. Ludlow, Civil Engineer.....	Winston.....	Gov. D. G. Fowle.....	1889 to 1892
J. A. Hodges, M.D.....	Fayetteville.....	State Society.....	1889 to 1893
J. M. Baker, M.D.....	Tarboro.....	State Society.....	1891 to 1893
J. H. Tucker, M.D.....	Henderson.....	Gov. T. M. Holt.....	1891 to 1893
F. P. Venable, Ph.D., Chemist.....	Chapel Hill.....	Gov. T. M. Holt.....	1891 to 1892
J. L. Ludlow, Civil Engineer.....	Winston.....	Gov. T. M. Holt.....	1892 to 1897
Thomas F. Wood, M.D., Secretary†.....	Wilmington.....	State Society.....	1891 to 1895
George G. Thomas, M.D., President.....	Wilmington.....	State Board of Health.....	1892 to 1895
S. Westray Battle, M.D.....	Asheville.....	State Society.....	1893 to 1895
W. H. Harrell, M.D.....	Williamston.....	State Society.....	1893 to 1895
John Whitehead, M.D.....	Salisbury.....	State Board of Health.....	1893 to 1895
W. H. G. Lucas.....	White Hall.....	Gov. Elias Carr.....	1893 to 1895
F. P. Venable, Ph.D., Chemist.....	Chapel Hill.....	Gov. Elias Carr.....	1893 to 1895
John C. Chase, Civil Engineer.....	Wilmington.....	Gov. Elias Carr.....	1894 to 1897
R. H. Lewis, M.D., Secretary.....	Raleigh.....	Gov. Elias Carr.....	1895 to 1897
W. P. Beall, M.D.....	Greensboro.....	Gov. Elias Carr.....	1895 to 1897
W. J. Lumsden, M.D.....	Elizabeth City.....	Gov. Elias Carr.....	1895 to 1897
John Whitehead, M.D.....	Salisbury.....	State Society.....	1895 to 1897
W. H. Harrell, M.D.....	Williamston.....	State Society.....	1895 to 1897
W. P. Beall, M.D.....	Greensboro.....	Gov. Elias Carr.....	1895 to 1897
R. H. Lewis, M.D., Secretary.....	Raleigh.....	Gov. Elias Carr.....	1897 to 1899
F. P. Venable, Ph.D., Chemist.....	Chapel Hill.....	Gov. Elias Carr.....	1897 to 1899
John C. Chase, Civil Engineer.....	Wilmington.....	Gov. Elias Carr.....	1897 to 1899
Charles J. O'Hagan, M.D.....	Greenville.....	Gov. D. L. Russell.....	1897 to 1899
John D. Spicer, M.D.....	Goldsboro.....	Gov. D. L. Russell.....	1897 to 1899
J. L. Nicholson, M.D.....	Richlands.....	Gov. D. L. Russell.....	1899 to 1901
R. H. Lewis, M.D., Secretary.....	Raleigh.....	Gov. D. L. Russell.....	1899 to 1901
A. W. Shaffer, Civil Engineer.....	Raleigh.....	Gov. D. L. Russell.....	1899 to 1901
Charles J. O'Hagan, M.D.....	Greenville.....	Gov. D. L. Russell.....	1899 to 1901
J. L. Nicholson, M.D.....	Richlands.....	Gov. D. L. Russell.....	1899 to 1901
Albert Anderson, M.D.....	Wilson.....	Gov. D. L. Russell.....	1899 to 1901
George G. Thomas, M.D., President.....	Wilmington.....	State Society.....	1899 to 1901

† Died in 1892, leaving a five-year unexpired term, which was filled by the Board.

Name	Address	Appointed by	Term
S. Westray Battle, M.D.	Asheville	State Society	1899 to 1901
H. W. Lewis, M.D.	Jackson	State Society	1899 to 1901
H. H. Dodson, M.D.	Milton	State Society	1901 to 1907
R. H. Lewis, M.D., Secretary	Raleigh	Gov. C. B. Aycock	1901 to 1907
W. P. Ivey, M.D.	Lenoir	Gov. C. B. Aycock	1901 to 1907
George G. Thomas, M.D., President	Wilmington	Gov. C. B. Aycock	1901 to 1905
Francis Duffy, M.D.	New Bern	Gov. C. B. Aycock	1901 to 1905
J. L. Ludlow, Civil Engineer	Winston	Gov. C. B. Aycock	1901 to 1905
S. Westray Battle, M.D.	Asheville	State Society	1901 to 1907
H. W. Lewis, M.D.	Jackson	State Society	1901 to 1907
W. H. Whitehead, M.D.	Rocky Mount	State Society	1901 to 1905
J. L. Nicholson, M.D.	Richlands	State Society	1901 to 1905
J. L. Ludlow, Civil Engineer	Winston	Gov. C. B. Aycock	1903 to 1909
J. Howell Way, M.D.	Waynesville	Gov. R. B. Glenn	1905 to 1911
W. O. Spencer, M.D.	Winston	Gov. R. B. Glenn	1905 to 1911
George G. Thomas, M.D., President	Wilmington	State Society	1905 to 1911
Thomas E. Anderson, M.D.	Statesville	State Society	1907 to 1913
R. H. Lewis, M.D.	Raleigh	Gov. R. B. Glenn	1907 to 1913
E. C. Register, M.D.	Charlotte	Gov. R. B. Glenn	1907 to 1909
David T. Tayloe, M.D.	Washington	State Society	1907 to 1913
James A. Burroughs, M.D. ¹	Asheville	State Society	1909 to 1913
J. E. Ashcraft, M.D.	Monroe	State Board of Health	1909 to 1913
J. L. Ludlow, Civil Engineer	Winston-Salem	Gov. W. W. Kitchin	1911 to 1917
J. Howell Way, M.D., President	Waynesville	Gov. W. W. Kitchin	1911 to 1917
W. O. Spencer, M.D.	Winston-Salem	Gov. W. W. Kitchin	1911 to 1917
Thomas E. Anderson, M.D.	Statesville	State Society	1911 to 1917
Charles O'H. Laughinghouse, M.D.	Greenville	State Society	1913 to 1919
R. H. Lewis, M.D.	Raleigh	Gov. Locke Craig	1913 to 1919
Edw. J. Wood, M.D.	Wilmington	Gov. Locke Craig	1913 to 1915
A. A. Kent, M.D. ²	Lenoir	State Society	1913 to 1919
Cyrus Thompson, M.D.	Jacksonville	State Society	1913 to 1919
Fletcher R. Harris, M.D.	Henderson	State Board of Health	1915 to 1921
J. L. Ludlow, Civil Engineer	Winston-Salem	Gov. Locke Craig	1917 to 1923
J. Howell Way, M.D., President	Waynesville	Gov. T. W. Bickett	1917 to 1923
E. C. Register, M.D. ¹	Charlotte	Gov. T. W. Bickett	1917 to 1923
Thomas E. Anderson, M.D.	Statesville	State Society	1917 to 1923
Charles O'H. Laughinghouse, M.D.	Greenville	State Society	1919 to 1923
Fletcher R. Harris, M.D. ³	Henderson	State Society	1919 to 1923
A. J. Crowell, M.D.	Charlotte	Gov. T. W. Bickett	1921 to 1923
Chas. E. Waddell, C.E. ⁴	Asheville	Gov. C. Morrison	1919 to 1925
Cyrus Thompson, M.D.	Jacksonville	State Society	1919 to 1925
R. H. Lewis, M.D.	Raleigh	Gov. T. W. Bickett	1923 to 1925
E. J. Tucker, D.D.S.	Roxboro	Gov. T. W. Bickett	1923 to 1929
J. Howell Way, M.D., President	Waynesville	Gov. C. Morrison	1923 to 1929
A. J. Crowell, M.D.	Charlotte	Gov. C. Morrison	1923 to 1927
James P. Stowe, Ph.G.	Charlotte	Gov. C. Morrison	1923 to 1925
D. A. Stanton, M.D.	High Point	State Board of Health	1923 to 1929
Thomas E. Anderson, M.D.	Statesville	State Society	1923 to 1926
Charles O'H. Laughinghouse, M.D. ⁵	Greenville	State Society	1925 to 1931
Cyrus Thompson, M.D. ¹	Jacksonville	State Society	1925 to 1931
D. A. Stanton, M.D.	High Point	State Society	1925 to 1931
R. H. Lewis, M.D. ¹	Raleigh	Gov. A. W. McLean	1926 to 1931
Jno. B. Wright, M.D. ⁶	Raleigh	Gov. A. W. McLean	1925 to 1931
E. J. Tucker, D.D.S. ⁶	Roxboro	Gov. A. W. McLean	1926 to 1927
W. S. Rankin, M.D. ⁴	Charlotte	State Board of Health	1927 to 1929
L. E. McDaniel, M.D.	Jackson	State Board of Health	1927 to 1929
Chas C. Orr, M.D.	Asheville	Gov. A. W. McLean	1929 to 1935
Thomas E. Anderson, M.D. ⁶	Statesville	State Society	1929 to 1935
L. E. McDaniel, M.D. ⁶	Jackson	State Society	1927 to 1933
James P. Stowe, Ph.G. ⁶	Charlotte	Gov. A. W. McLean	1929 to 1935
A. J. Crowell, M.D. ⁶	Charlotte	Gov. O. Max Gardner	1930 to 1931
J. M. Parrott, M.D. ⁶	Kinston	State Board of Health	1929 to 1935
Chas. C. Orr, M.D. ⁶	Asheville	Gov. O. Max Gardner	1931 to 1935
J. M. Parrott, M.D. ⁵	Kinston	State Society	1931 to 1935
C. V. Reynolds, M.D.	Asheville	State Society	1931 to 1933
L. B. Evans, M.D.	Windsor	State Society	1931 to 1933
S. D. Craig, M.D.	Winston-Salem	State Society	1931 to 1933
John T. Burrus, M.D.	High Point	Gov. O. Max Gardner	1931 to 1933
J. N. Johnson, D.D.S.	Goldsboro	Gov. O. Max Gardner	1931 to 1933
J. A. Goode, Ph.G.	Asheville	Gov. O. Max Gardner	1931 to 1933
H. L. Large, M.D.	Rocky Mount	Gov. O. Max Gardner	1931 to 1935
H. G. Baity, C.E.	Chapel Hill	Gov. O. Max Gardner	1931 to 1935

¹ Died leaving unexpired term.² Resigned to become member of General Assembly.³ Resigned to become Health Officer Vance County.⁴ Resigned.⁵ Resigned to become Secretary of State Board of Health.⁶ Term terminated on account of the reorganization of the State Board of Health by General Assembly.

Name	Address	Appointed by	Term
Grady G. Dixon, M.D. ⁷	Ayden	Ex. Com. State Society	1931 to 1932
Grady G. Dixon, M.D. ⁷	Ayden	State Society	1932 to 1935
S. D. Craig, M.D.	Winston-Salem	State Society	1933 to 1937
W. T. Rainey, M.D.	Fayetteville	State Society	1933 to 1937
J. N. Johnson, D.D.S.	Goldsboro	Gov. J. C. B. Ehringhaus	1933 to 1937
Hubert B. Haywood, M.D.	Raleigh	Gov. J. C. B. Ehringhaus	1933 to 1937
James P. Stowe, Ph.G.	Charlotte	Gov. J. C. B. Ehringhaus	1933 to 1937
Grady G. Dixon, M.D.	Ayden	State Society	1935 to 1939
J. LaBruce Ward, M.D.	Asheville	State Society	1935 to 1939
H. Lee Large, M.D.	Rocky Mount	Gov. J. C. B. Ehringhaus	1935 to 1939
H. G. Baity, C.E.	Chapel Hill	Gov. J. C. B. Ehringhaus	1935 to 1939
J. N. Johnson, D.D.S.	Goldsboro	Gov. Clyde R. Hoey	1937 to 1941
Hubert B. Haywood, M.D.	Raleigh	Gov. Clyde R. Hoey	1937 to 1941
James P. Stowe, Ph.G.	Charlotte	Gov. Clyde R. Hoey	1937 to 1941
S. D. Craig, M.D.	Winston-Salem	State Society	1937 to 1941
W. T. Rainey, M.D.	Fayetteville	State Society	1937 to 1941
Grady G. Dixon, M.D.	Ayden	State Society	1939 to 1943
J. LaBruce Ward, M.D.	Asheville	State Society	1939 to 1943
H. Lee Large, M.D.	Rocky Mount	Gov. Clyde R. Hoey	1939 to 1943
H. G. Baity, Sc.D.	Chapel Hill	Gov. Clyde R. Hoey	1939 to 1943
C. C. Fordham, Jr., Ph.G. ⁸	Greensboro	Gov. Clyde R. Hoey	1940 to 1943
S. D. Craig, M.D.	Winston-Salem	State Society	1941 to 1945
W. T. Rainey, M.D.	Fayetteville	State Society	1941 to 1945
Hubert B. Haywood, M.D.	Raleigh	Gov. J. Melville Broughton	1941 to 1945
J. N. Johnson, D.D.S.	Goldsboro	Gov. J. Melville Broughton	1941 to 1945
James O. Nolan, M.D.	Kannapolis	Gov. J. Melville Broughton	1941 to 1945
Grady G. Dixon, M.D.	Ayden	State Society	1943 to 1947
J. LaBruce Ward, M.D.	Asheville	State Society	1943 to 1947
H. Lee Large, M.D.	Rocky Mount	Gov. J. Melville Broughton	1943 to 1947
Larry I. Moore, Jr.	Wilson	Gov. J. Melville Broughton	1943 to 1947
S. D. Craig, M.D., Pres.	Winston-Salem	State Society	1945 to 1949
W. T. Rainey, M.D.	Fayetteville	State Society	1945 to 1949
Hubert B. Haywood, M.D.	Raleigh	Gov. R. Gregg Cherry	1945 to 1949
James O. Nolan, M.D.	Kannapolis	Gov. R. Gregg Cherry	1945 to 1949
Paul Jones, D.D.S. ⁹	Farmville	Gov. R. Gregg Cherry	1946 to 1949
Jasper C. Jackson, Ph.G. ¹⁰	Lumberton	Gov. R. Gregg Cherry	1945 to 1947
Grady G. Dixon, M.D., Pres.	Ayden	State Society	1947 to 1951
H. Lee Large, M.D.	Rocky Mount	Gov. R. Gregg Cherry	1947 to 1951
J. LaBruce Ward, M.D.	Asheville	State Society	1947 to 1951
Hubert B. Haywood, M.D.	Raleigh	Gov. W. Kerr Scott	1949 to 1953
Mrs. James B. Hunt	Lucama	Gov. W. Kerr Scott	1949 to 1953
A. C. Current, D.D.S.	Gastonia	Gov. W. Kerr Scott	1949 to 1953
John R. Bender, M.D.	Winston-Salem	State Society	1949 to 1953
Benjamin J. Lawrence, M.D.	Raleigh	State Society	1949 to 1953
G. Grady Dixon, M.D.	Ayden	Medical Society	1951 to 1955
George Curtis Crump, M.D.	Asheville	Medical Society	1951 to 1955
John P. Henderson, Jr., M.D. ¹¹	Sneads Ferry	Gov. Wm. B. Umstead	1954 to 1955
H. C. Lutz, Phg.	Hickory	Gov. W. Kerr Scott	1951 to 1955
Hubert B. Haywood, M. D.	Raleigh	Gov. Wm. B. Umstead	1953 to 1957
Mrs. J. E. Latta	Hillsboro	Gov. Wm. B. Umstead	1953 to 1957
A. C. Current, D.D.S.	Gastonia	Gov. Wm. B. Umstead	1953 to 1957
John R. Bender, M.D.	Winston-Salem	Medical Society	1953 to 1957
Benjamin J. Lawrence, M.D.	Raleigh	Medical Society	1953 to 1957
G. Grady Dixon, M.D.	Ayden	Medical Society	1955 to 1959
George Curtis Crump, M.D.	Asheville	Medical Society	1955 to 1959
John P. Henderson, Jr., M.D.	Sneads Ferry	Gov. Luther H. Hodges	1955 to 1959
H. C. Lutz, Phg.	Hickory	Gov. Luther H. Hodges	1955 to 1959

7 To fill vacancy caused by resignation of Dr. J. M. Parrott.

8 To fill vacancy caused by the death of James P. Stowe, Ph.G.

9 To fill vacancy caused by resignation of J. N. Johnson, D.D.S.

10 To fill vacancy caused by resignation of Larry I. Moore, Jr.

11 To fill vacancy caused by the death of Dr. H. Lee Large.

ROSTER OF MEMBERS OF THE VARIOUS BOARDS OF MEDICAL EXAMINERS OF THE STATE OF NORTH CAROLINA

FIRST BOARD

James H. Dickson, Wilmington.....	1859-1866
Charles E. Johnson, Raleigh.....	1859-1866
Caleb Winslow, Hertford.....	1859-1866
Otis F. Manson, Townsville.....	1859-1866
William H. McKee, Raleigh.....	1859-1866
Christopher Happoldt, Morganton.....	1859-1866
J. Graham Tull, New Bern.....	1859-1866
Samuel T. Iredell, Secretary.....	1859-1866

SECOND BOARD

N. J. Pittman, Tarboro.....	1866-1872
E. Burke Haywood, Raleigh.....	1866-1872
R. H. Winborne, Edenton.....	1866-1872
S. S. Satchwell, Rocky Point.....	1866-1872
J. J. Summerell, Salisbury.....	1866-1872
R. B. Haywood, Raleigh.....	1866-1872
M. Whitehead, Salisbury.....	1866-1872
J. F. Shaffner, Salem.....	1866-1872
William Little, Secretary.....	1866-1872
Thomas F. Wood, Secretary, Wilmington.....	1867-1872

THIRD BOARD

Charles J. O'Hagan, Greenville.....	1872-1878
W. A. B. Norcom, Edenton.....	1872-1878
C. Tate Murphy, Clinton.....	1872-1878
George A. Foote, Warrenton.....	1872-1878
J. W. Jones, Tarboro.....	1872-1878
R. L. Payne, Lexington.....	1872-1878
Charles Duffy, Jr., Secretary, New Bern.....	1872-1878

FOURTH BOARD

Peter E. Hines, Raleigh.....	1878-1884
Thomas D. Haigh, Fayetteville.....	1878-1884
George L. Kirby, Goldsboro.....	1878-1884
Thomas F. Wood, Wilmington.....	1878-1884
Joseph Graham, Charlotte.....	1878-1884
Robert I. Hicks, Williamston ¹	1878-1880
Richard H. Lewis, Raleigh ²	1880-1884
Henry T. Bahnson, Secretary, Salem.....	1878-1884

FIFTH BOARD

William R. Wood, Scotland Neck.....	1884-1890
Augustus W. Knox, Raleigh.....	1884-1890
Francis Duffy, New Bern.....	1884-1890
Patrick L. Murphy, Morganton.....	1884-1890
Willis Alston, Littleton.....	1884-1890
J. A. Reagan, Weaverville.....	1884-1890
W. J. H. Bellamy, Secretary, Wilmington.....	1884-1890

SIXTH AND SEVENTH BOARDS³

R. L. Payne, Jr., Lexington.....	1890-1892
George W. Purefoy, Asheville.....	1890-1892
George G. Thomas, Wilmington.....	1890-1894
Robert S. Young, Concord.....	1890-1894
William H. Whitehead, Rocky Mount.....	1890-1896
George W. Long, Graham.....	1890-1896
L. J. Picot, Secretary, Littleton.....	1890-1896
Julian M. Baker, Tarboro.....	1892-1898
H. B. Weaver, Secretary, Asheville.....	1892-1898
J. M. Hays, Greensboro ⁴	1894-1897
Kemp P. Battle, Jr., Raleigh ⁵	1897-1900
Thomas S. Burbank, Wilmington ¹	1894-1898
Richard H. Whitehead, Chapel Hill ⁴	1896-1898
William H. H. Cobb, Goldsboro ⁶	1898-1900
J. Howell Way, Secretary, Waynesville ⁷	1898-1902
David T. Tayloe, Washington.....	1896-1902
Thomas E. Anderson, Sec., Statesville.....	1896-1902
Albert Anderson, Wilson ⁸	1898-1902
Edward C. Register, Charlotte ⁸	1898-1902
Thomas S. McMullan, Hertford ⁸	1900-1902
John C. Walton ⁸	1900-1902

EIGHTH BOARD

A. A. Kent, Lenoir.....	1902-1908
Charles O'H. Laughinghouse, Greenville.....	1902-1908
M. H. Fletcher, Asheville.....	1902-1908
James M. Parrott, Kinston.....	1902-1908
J. T. J. Battle, Greensboro.....	1902-1908
Frank H. Russell, Wilmington.....	1902-1908
George W. Pressly, Secretary, Charlotte ¹	1902-1906
G. T. Sikes, Secretary, Grissom ⁹	1906-1908

NINTH BOARD

Lewis B. McBrayer, Asheville.....	1908-1914
John C. Rodman, Washington.....	1908-1914
William W. McKenzie, Salisbury.....	1908-1914
Henry H. Dodson, Greensboro.....	1908-1914
John Bynum, Winston-Salem.....	1908-1914
J. L. Nicholson, Richlands.....	1908-1914
Benj. K. Hays, Secretary, Oxford.....	1908-1914

TENTH BOARD

Isaac M. Taylor, Morganton.....	1914-1920
John Q. Myers, Charlotte.....	1914-1920
Jacob F. Highsmith, Fayetteville.....	1914-1920
Martin L. Stevens, Asheville.....	1914-1920
Charles T. Harper, Wilmington ⁴	1914-1915
Edwin G. Moore, Elm City ¹⁰	1915-1920
John G. Blount, Washington ¹¹	1914-1920
Hubert A. Royster, Secretary, Raleigh.....	1914-1920

ELEVENTH BOARD

Lester A. Crowell, Lincolnton.....	1920-1926
William P. Holt, Duke.....	1920-1926
J. Gerald Murphy, Wilmington.....	1920-1926
Lucius N. Glenn, Gastonia.....	1920-1926
Clarence A. Shore, Raleigh.....	1920-1926
William M. Jones, Greensboro.....	1920-1926
Kemp P. B. Bonner, Sec., Morehead City.....	1920-1926

TWELFTH BOARD

Paul H. Ringer, Asheville.....	1926-1932
W. Houston Moore, Wilmington.....	1926-1932
T. W. M. Long, Roanoke Rapids.....	1926-1932
W. W. Dawson, Grifton ⁴	1926-1930
J. K. Pepper, Winston-Salem.....	1926-1932
Foy Roberson, Durham.....	1926-1932
John W. McConnell, Secretary, Davidson.....	1926-1932
David T. Tayloe, Jr., Washington ¹²	1930-1932

THIRTEENTH BOARD

Ben F. Royal, Morehead City.....	1932-1938
Benj. J. Lawrence, Secretary, Raleigh.....	1932-1938
F. Webb Griffith, Asheville.....	1932-1938
Hamilton W. McKay, Charlotte.....	1932-1938
J. W. Vernon, Morganton.....	1932-1938
W. H. Smith, Goldsboro.....	1932-1938
K. G. Averitt, Cedar Creek ⁴	1932-1936
Roscoe D. McMillan, Red Springs ¹³	1936-1938

¹ Resigned before expiration of term.

² Elected for unexpired term of Dr. Hicks.

³ In 1890 the Medical Society of the State of North Carolina adopted the plan of electing members of the Board in such a manner that the terms would expire at different intervals of two years. This practice was followed for twelve years, or until 1902, when the plan was abandoned; an equivalent of two terms of six years each. It is evident that the Society arranged to abandon the policy as early as 1898, as two members were elected for short terms, and two years later two other members were elected for still shorter terms. It is therefore impossible to separate the sixth and seventh Boards, since the membership was overlapping.

⁴ Died before the expiration of his term.

⁵ Elected to serve unexpired term of Dr. Hays.

⁶ Elected to serve the unexpired term of Dr. Burbank.

⁷ Elected to serve the unexpired term of Dr. Whitehead.

⁸ Elected for short term expiring in 1902.

⁹ Elected to serve the unexpired term of Dr. Pressly.

¹⁰ Elected to serve the unexpired term of Dr. Harper.

¹¹ Died a few months before the expiration of his term; such a short time that the vacancy was not filled.

¹² Elected to serve unexpired term of Dr. W. W. Dawson.

¹³ Elected to serve unexpired term of Dr. Averitt.

FOURTEENTH BOARD

Karl B. Pace, Greenville.....	1938-1944
William M. Coppridge, Durham.....	1938-1944
Frank A. Sharpe, Greensboro.....	1938-1944
Lewis W. Elias, Asheville ¹⁴	1938-1943
J. Street Brewer, Roseboro.....	1938-1944
W. D. James, Secretary, Hamlet.....	1938-1944
L. A. Crowell, Jr., Lincolnton.....	1938-1944
John LaBruce Ward, Asheville ¹⁴	1943-1944

FIFTEENTH BOARD

C. W. Armstrong, Salisbury.....	1944-1950
Paul G. Parker, Erwin.....	1944-1950
M. D. Bonner, Jamestown.....	1944-1950
T. Leslie Lee, Kinston.....	1944-1950
Roy B. McKnight, Charlotte.....	1944-1950
M. A. Pittman, Wilson.....	1944-1950
Ivan M. Procter, Secretary, Raleigh.....	1944-1950
James B. Bullitt, Chapel Hill ¹⁵	1949-1950
Paul F. Whitaker, Kinston ¹⁶	1950

SIXTEENTH BOARD

Amos N. Johnson, Garland.....	1950-1956
Heyward C. Thompson, Shelby.....	1950-1956
James P. Rousseau, Winston-Salem.....	1950-1956
Newsom P. Battle, Rocky Mount.....	1950-1956
Clyde R. Hedrick, Lenoir.....	1950-1956
L. Randolph Doffermeyre, Dunn.....	1950-1956
G. Westbrook Murphy, Asheville ¹⁷	1955
Joseph J. Combs, Secretary, Raleigh.....	1950-1956

¹⁴ Elected to serve unexpired term of Dr. Elias.

¹⁵ Elected to serve unexpired term of Dr. T. Leslie Lee.

¹⁶ Elected to serve unexpired term of Dr. Paul G. Parker.

¹⁷ Elected to serve unexpired term of Dr. James P. Rousseau.

MEDICAL AWARDS

MOORE COUNTY MEDICAL SOCIETY MEDAL

In 1927 the Moore County Medical Society established a fund, the interest from which is used to pay for a medal to be given for the best paper read at the State Society meeting each year. No one is eligible to receive this medal except Fellows of the Medical Society of the State of North Carolina in good standing; no invited guest is allowed to compete.

Each Section Chairman selects a committee of three to decide on the best paper written in their section. The winning papers are then turned over to the State Committee, who select the one to receive the medal. The following Fellows have been awarded this medal:

- 1928—Paul Pressly McCain, M.D.....Sanatorium
“The Diagnosis and Significance of Juvenile Tuberculosis”
(From Section on Pediatrics)
- 1929—A. B. Holmes, M.D.....Fairmont
“The Treatment of Uremia”
(From Section on Chemistry, Materia Medica and Therapeutics)
- 1930—C. T. Smith, M.D., and W. Bernard Kinlaw, M.D.....Rocky Mount
“The Clinical Consideration of Anaemia of Pregnancy and of Puerperium”
(From Section on Practice of Medicine)
- 1931—F. C. Smith, M.D.....Charlotte
“Practical Value of Perimetry in Intracranial Conditions; Case Reports” (tumors, vascular disease, toxemia, syphilis and trauma)
(From Section on Eye, Ear, Nose and Throat)

- 1932—Charles I. Allen, M.D.....Wadesboro
“An Improved Splint for Treating Fractures of the Lower Extremity Showing Reduction and Skeletal Distraction Attachments”
(From Section on Surgery)
- 1933—H. L. Sloan, M.D.....Charlotte
“Some General Remarks about Cataract Surgery, With Report of 100 Consecutive Uncomplicated Cataract Operations”
(From Section on Ophthalmology and Otolaryngology)
- J. R. Adams, M.D.....Charlotte
“Hypo-glycaemia in Children”
(From Section on Pediatrics)
- 1934—Fred E. Motley, M.D.....Charlotte
“Complications of Mastoiditis with Special Reference to Septicemia”
(From Section on Ophthalmology and Otolaryngology)
- 1935—Arthur H. London, M.D.....Durham
“The Composition of an Average Pediatrics Practice”
(From Section on Pediatrics)
- 1936—V. K. Hart, M.D.....Charlotte
“Etiological and Therapeutic Aspects of Bronchiectasis with Clinical Observations on Bronchial Lavage by the Stitt Method”
(From Section on Ophthalmology and Otolaryngology)
- 1937—No award made.
- 1938—O. Hunter Jones, M.D.....Charlotte
“Pelvic Architecture and Classification with its Practical Application”
(From Section on Gynecology and Obstetrics)
- 1939—Donnell B. Cobb, M.D.....Goldsboro
“Vaginal Ureterolithotomy”
(From Section on Surgery)
- 1940—C. R. Monroe, M.D., C. D. Thomas, M.D., and C. L. Gray, M.D.....Pinehurst
“Thoracoplasty and Apicolysis”
(From Section on Surgery)
- 1941—Walter R. Johnson, M.D.....Asheville
“Is Diverticulitis of the Colon a Surgical Disease?”
(From Section on Practice of Medicine)
- 1942—E. P. Alyea, M.D.....Durham
“Castration for Carcinoma of the Prostate Gland”
(From Section on Surgery)
- 1943—No award made.
- 1944—D. F. Milam, M.D.....Chapel Hill
“Vitamin C Content of Some North Carolina Cooked Foods”
(From Section on Public Health and Education)
- 1945—No Meeting.
- 1946—E. C. Hamblen, MD.....Durham
“Some Aspects of Sex Endocrinology in General Practice”
(From Section on General Practice of Medicine and Surgery)
- 1947—W. L. Thomas, M.D.....Durham
“Some psychosomatic Problems in Gynecology”
(From Section on Gynecology and Obstetrics)

- 1948—Felda Hightower, M.D.....Winston-Salem
 "The Control of Electrolyte and Water
 Balance in Surgical Patients"
 (From Section on Surgery)
- 1949—George J. Baylin, M.D.....Durham
 "The Roentgen Aspect of Non-Opaque
 Pulmonary Foreign Bodies"
 (From Section on Radiology)
- 1950—Parker R. Beamer, M.D.....Winston-Salem
 "Studies on Experimental Leptospirosis"
 (From Section on Pathology)
- 1954—Paul Kimmelstiel, M.D.....Charlotte
 Roland T. Pixley, M.D.....Charlotte
 John Crawford, M.D.....Charlotte
 "Statistical Review of Twenty-two Thousand
 Cases Examined by Cervical Smears"
 (From Section on Pathology)
- 1951—John P. U. McLeod, M.D.....Marshville
 "A Simplified Modification for Staining of
 the Vaginal Smear for Immediate Appraisal
 of Endocrine Activity"
 (From Section on Gynecology and Obstetrics)
- 1952—Samuel F. Ravenel, M.D.....Greensboro
 "Humidification in Pediatrics"
 (From Section on Pediatrics)
- 1953—Harrie R. Chamberlin, M.D.....Chapel Hill
 "Diagnosis and Management of Poisoning Due
 to Organic Phosphate Insecticides"
 (From Section on Pediatrics)

THE GEORGE MARION COOPER AWARD

The Fellows of the Wake County Medical Society present..... this George Marion Cooper Award established in honor of George Marion Cooper, physician and health benefactor.

This medal is awarded by the Fellows of the Wake County Medical Society as a token of appreciation and esteem in recognition of the eminence of an essay contributing to the knowledge and advancement of the science of medicine in the field of Preventive Medicine, Public Health, or Maternal and Infant Health Care, presented before the Medical Society of the State of North Carolina. The following Fellows have been awarded this medal:

- 1951—Donald L. Whitener, M.D.....Winston-Salem
 "The Management of Labor and Delivery in
 the Interest of the Premature Infant"
 (From Section on Gynecology and Obstetrics)
- 1952—Ronald Stephen, M.D., Senior Author;
 Duke University.....Durham
 "The Evaluation of Methods of Pain Relief
 During Labor and Delivery with Ref-
 erence to Mother and Child."
 (From Section on Gynecology and Obstetrics)
- 1953—Ernest Craige, M.D.....Chapel Hill
 "The Prevention of Recurrences of Rheumatic
 Fever"
 (From the Section on Practice of Medicine)
- 1954—Richard L. Pearse, M.D.....Durham
 Eleanor Easley, M.D.....Durham
 Kenneth Podger, M.D.....Durham
 "Obstetric Analgesia and Anesthesia"
 (From Section on Obstetrics and Gynecology)

GASTON COUNTY MEDICAL SOCIETY AWARD

By authority of the House of Delegates an award is established by the Gaston County Medical Society for the best presentation of audio-visual material in scientific treatise and will be awarded to the best presentation annually at the Annual Session of the State Society. Competition will be restricted to audio-visual material as provided by the rules. Program Chairmen of the eleven scientific sections should take note of this in the preparation of the 1956 program and in judging of presentations at the Annual Session in 1956. The following Fellows have been awarded this medal:

- 1952—Kenneth L. Pickrell, M.D.....Durham
 "Tattooing the Cornea"
 (From Scientific Exhibits)
- 1953—Joseph E. Markee, M.D.....Durham
 "Autonomic Nervous System"
 (Film from Audio-Visual Postgraduate
 Instructional Program)
- 1954—William H. Boyce, M.D.....Winston-Salem
 Fred K. Garvey, M.D.....Winston-Salem
 Charles M. Norfleet, M.D.....Winston-Salem
 "Biocolloids of Urine in Health and in Cal-
 culous Disease"
 (From Scientific Exhibits)

EXECUTIVE COUNCIL MEETINGS

SUNDAY MORNING SESSION

May 1, 1955

The Executive Council of the Medical Society of the State of North Carolina convened in the Carolina, Pinehurst, North Carolina, at ten-fifteen o'clock, President Zack D. Owens presiding.

Dr. Westbrook Murphy gave the invocation.

Dr. Hill, the Constitutional Secretary, called the roll. Seventeen answered present and a Quorum was declared.

President Owens: The minutes of the last meeting, as well as the one of September 26, 1954, are available here or disposed of as you see fit.

These reports have been reviewed.

Dr. Sams: I move that the reading of the minutes be dispensed with.

[The motion was seconded by Dr. Brinn, was put to a vote and carried.]

President Owens: Next for discussion is the question of Board structure in which the Society participates, Hospital Saving of North Carolina, Inc., Board of Trustees. Dr. Rousseau will discuss it.

Dr. Rousseau: Mr. Chairman and Gentlemen: As you know, the President-Elect automatically serves just one year as a member of the Board of Hospital Saving. In this year, I believe I have attended every meeting of Hospital Saving except one and have also attended most of Dr. Smith's meetings of the Insurance Committee.

I feel very definitely with this year's observation, that the President-Elect of the Medical Society should not be a voting member of the Board of Trustees of the Hospital Saving simply because one year's service is not a long enough time to have him understand and intelligently vote on the important questions which arise in the Hospital Saving Board. I would strongly feel that the President-Elect should attend every meeting of the Hospital Saving Board to receive from them information of interest to the Medical Society and to Hospital Saving. I feel that the President-Elect, without previous experience with insurance, would be totally lost.

I believe we should have a member elected to serve the full four-year term that the Hospital Association and lay members do in order to represent the Medical Society efficiently.

Dr. Sams: On Dr. Rousseau's recommendation, I make a motion; that the President-Elect of the State Medical Society of North Carolina be considered a member ex-officio of the Board of Trustees of the Hospital Saving Association with no voting power; I also move, that all four of the Medical Society members of the Hospital Saving Association Board of Trustees be elected from the State Medical Society.

Dr. Rousseau: I discussed this this past year with the Hospital Saving Board, and they will change their By-Laws to conform to any request made by this Council in regard to the President-Elect being an ex-officio member and a new member representing the Medical Society for the full straight term. I believe the Hospital Association agreed to do the same thing.

Dr. Sams: That will require a change in our By-Laws; so we could recommend to our By-Laws Committee that a resolution be introduced by the House of Delegates to make this motion effective.

[The motion was seconded by Dr. Rhodes.]

[The motion was put to a vote and carried.]

President Owens: Report of Committee on Intern Allocations to Non-teaching Hospitals, Dr. Donald B. Koonce to report.

Dr. Koonce: I have nothing further to report except what is in the compilation that we met and discussed it and the Examiners didn't see fit to comply with our recommendation or our request, and it was denied.

Dr. Rousseau: I will make a motion that Dr. Koonce's report be accepted and that his Committee has performed its duties in appearing before the Board of Medical Examiners concerning the foreign graduates.

[The motion was seconded by Dr. Rhodes, was put to a vote and carried.]

President Owens: How about your recommendation, Dr. Rousseau?

Dr. Rousseau: I make a motion for this Council's consideration, that a committee representing non-teaching hospitals, the medical schools, and the Medical Society of the State of North Carolina and the Hospital Association—I think we ought to have a member of the Hospital Association on this Committee—be appointed to make a careful study of the distribution of house officers in North Carolina in order to help our non-teaching hospitals to secure their quota under the matching program.

[The motion was seconded, put to a vote and carried.]

President Owens: We will pass on now to Resolution New Hanover County Medical Society Related to Participation in Corporate Health Service Schemes, conveyed by a letter dated March 30, 1955, over the signature of Dr. Horace G. Moore, Jr., Secretary of the New Hanover County Medical Society reads as follows:

This is to notify you and whomever it may concern of a motion which was passed by the New Hanover County Medical Society at a special meeting last evening. The motion is as follows:

"The New Hanover County Medical Society has gone on record as requesting its members not to participate in any insurance or other program limiting patients their free choice of physicians, or any other program with similar socialistic tendencies."

Dr. Smith: I make a motion, that we accept this report as information and point out that their action is in accord with the Code of Ethics as elaborated on page 24 of our Annual Compilation of Reports.

[The motion was seconded by Dr. Sams.]

[The motion was put to a vote and carried.]

President Owens: Gentlemen, there has been a discussion of the Governor's Safety Council State-wide Campaign; Dr. George Paschal to report.

Dr. Paschal: Mr. Chairman, some time ago, the Governor established this Traffic Safety Council, and there are a large number of organizations scattered throughout North Carolina that are participating in it. Almost all of them are coming up with a variety of suggestions which we think would lessen the number of highway accidents and highway fatalities.

The Medical Society of North Carolina has been asked to participate in this Traffic Safety Council and has been asked to submit any recommendations that they might have to further the ideals of this particular group.

I believe there is no question but that the Medical Society of the State of North Carolina is wholeheartedly in favor of seeing the incidence of traffic fatalities and accidents diminished, and I believe that we both individually and collectively would be glad to participate in any program which would bring this about.

It is quite obvious that the present method used to control and diminish accidents on our highways is ineffective. While there are a number of causes that are related to the incidence of accidents, it is apparent excessive speed and drunken driving are among the chief offenders as a causative factor in the production of accidents and fatalities. Aside from the "driver error," a leading cause of persistent traffic violations which lead to disastrous accidents is that there seems to be no deterrent which makes any appreciable impression on the apprehended offenders. Consequently, it is apparent that much of the danger of present automotive transportation is a direct consequence of the failure to assume appropriate obligations in regard to adequate law enforcement and adequate punishment for such laws as have been enacted.

Studies are being carried out on an extensive basis by the Cornell Safety Committee of the American College of Surgeons (the nature of which you gentlemen have been previously appraised) to determine and classify the various causes of accidents and injuries on our highways. Their recommendations as to ways to lessen the number of fatalities and serious injuries certainly bear merit and consideration.

It seems to me that we of this Society should be particularly concerned with the ravages resulting from automobile accidents and consequently this discussor submits the following recommendations:

1. That the speed limit be reduced and that all motor vehicles bear a governor control of speeding.
2. Without infringement on individual rights, that legislation be passed providing mandatory sentences for drunken or reckless driving.
3. That our legislative and judiciary bodies be appraised of our support of the ideals of the Traffic Safety Council and that we use the influence of our Society in regard to adequate law enactment, adequate punishment and law enforcement.
4. That our Society approve in a broad sense the recommendations of the Cornell Safety Committee of the American College of Surgeons which are directed toward the reduction of accidents, injuries and deaths.

I realize these recommendations are somewhat drastic, but believe that only drastic action will have any effect in remedying this serious problem. Possibly we are in no position to make any decision concerning this matter today. Our President may desire to appoint a committee to further study the problem and make other recommendations through the proper channels.

We in the Emergency Room have seen these people brought in, we know that drunken driving and speed has a great deal to do with a large part of the accidents.

This Commission and the Cornell group are recommending—and it might be well to give serious consideration to supporting their recommendation—that some means be provided of keeping the package closed so that the driver cannot be thrown out because when that happens a large percentage of those who are thrown from the package are killed. They recommend safety belts. They recommend, in some instances, head gear.

I think it certainly is a positive recommendation that would have some beneficial effects.

I think it certainly is a positive recommendation that would have some beneficial effects.

I will make it as a motion, that we endorse the aims of the Traffic Safety Council and our State Department of Motor Vehicles, and offer our services to participate in any way we can.

Since specific reference was made in the report to the Cornell study, I want to say that they are

completely helpless without the local cooperation that they are getting in this study. As a matter of fact, the people of North Carolina are doing practically all the work, and I would like to, in addition to the Cornell study group, recognize the local practicing physicians who are giving certain information to cooperating hospitals, to state and local health departments, and to the staff of the Motor Vehicle Bureau, who are all working together and actually doing the basic work for the Cornell study.

[The motion was seconded by Dr. Smith.]

President Owens: The motion (with amendments) is carried.

Dr. Sams: Mr. President, I move that we recess until 2:00 p.m.

[The motion was seconded, was put to a vote and carried, and the meeting recessed for luncheon at twelve-twenty o'clock.]

SUNDAY AFTERNOON SESSION

May 1, 1955

The meeting reconvened at two o'clock, President Owens presiding.

President Owens: Gentlemen, we will reconvene, and we will hear from Dr. Norris Smith's Report of the Committee Advisory to Hospital Saving.

[The above item was presented by Dr. O. Norris Smith, repeated subsequently at a session of the House of Delegates, and is in the record of that session.]

President Owens: Gentlemen, Dr. Smith has just finished his supplemental report.

Dr. Sams: I move that the report be accepted.

[The motion was seconded by Dr. Koonce. The motion was put to a vote and carried.]

President Owens: The report of the Credentials Committee, Dr. W. M. Johnson, Chairman.

Dr. Johnson: We won't have much to report to you until tomorrow. I will read to you from a letter:

Dear Dr. Johnson:

The Madison County Medical Society has certified Dr. J. C. Bradley, who resides at Weaverville, Buncombe County, as a delegate to represent the Madison County Medical Society. They have also certified Dr. Lawrence T. Sprinkle, who resides in Weaverville, which is in Buncombe County, as an alternate; and we also find that Dr. Sprinkle is a member of the Buncombe County Medical Society and pays his dues to the State and AMA, the same as Dr. Bradley, through the Buncombe County Medical Society. The President of the Madison County Medical Society advises us that no one residing in Madison County will attend the annual meeting of the State Society, and therefore they state that Dr. J. C. Bradley and Dr. Lawrence Sprinkle are both members of the Madison County Medical Society and attend its meetings regularly, although we are not aware of any rule of the Constitution and By-Laws which would permit a non-resident of a county to represent that county as a delegate except where they are members of a component hyphenated society, which is not the case with either Madison or Buncombe. They have requested a certificate for a delegate in favor of Dr. Bradley.

Dr. London: I move that the rules be suspended and that the Chairman of the Credentials Committee certify these gentlemen as representing Madison County.

[The motion was seconded by Dr. Koonce.]

[The motion was put to a vote and carried.]

President Owens: Resolution on adoption of definition for practice of pathology.

Mr. Barnes: Gentlemen: This is a letter written to

ns by Dr. J. O. Williams, Secretary of the North Carolina Society of Pathologists, and it says:

Dear Mr. Barnes:

As Secretary of the Pathology Section of our State, I have been asked to contact you with regard to the stand that our Medical Society takes concerning the practice of pathology.

Recently, the Iowa Hospital Association has gone on record as wholeheartedly rejecting the contention that all of the practice of pathology is the practice of medicine. The Iowa Association of Pathologists has in turn stated that pathology is the practice of medicine and that it cannot be separated into professional and technical services. In September, 1954, the Colorado State Society adopted the following resolution stating that:

Whereas, organized medicine in the United States is currently reaffirming the definition of the practice of medicine and of various branches thereof; and

Whereas, the Colorado State Medical Society believes that all pathology is a practice of medicine and is fitting that at this time the Society records such definitions; therefore be it

RESOLVED, That the following definition is hereby adopted by the Colorado Medical Society and made a part of the minutes of the Society at the 84th Annual Meeting:

"All human pathology is the practice of medicine including, but not limited to, histopathology, cytopathology, bacteriology, serology, parasitology, hematology, clinical chemistry and clinical microscopy."

Our group of pathologists is interested in knowing if our own State Society has ever taken such an official stand concerning the practice of pathology. If such a stand has not been taken and such a resolution not passed, we will plan to discuss this matter at the meeting in Pinehurst and ask the State Society to consider passing such a resolution in order that the practice of pathology may be clearly defined as "the practice of medicine."

Dr. Murphy: Mr. President, I would like to move that this resolution be referred to the House of Delegates with the recommendation that it be adopted.

Dr. Reece: The State Pathology Society, the Society of American Pathologists, and also the Section of the State Society are requesting that the State Medical Society definitely interpret this.

[The motion was seconded by Dr. Sams, was put to a vote and carried.]

President Owens: Discuss Budget Request of Committees.

Mr. Barnes: Mr. Chairman, this is a budget request from the Committee on Maternal Welfare, and it shows that the total receipts and balance were \$3255.26.

Then it shows a series of disbursements in the amount of \$2274.40, with a balance on December 31, 1954, of \$980.86.

Subsequent to January 1, they have made a request for the entire budget allocation for that Committee of \$2600.00

Dr. Koonce: I move that the Committee go on record as opposing balances in committees and request that this Committee, with the help of the Finance Committee, adjust it.

[The motion was seconded by Dr. Sams.]

[The motion was put to a vote and carried.]

Dr. J. W. Roy Norton responded to the invitation of the Executive Council to discuss "Trends, Problems, and Suggestion of Policy in Regard to Salk Poliomyelitis Vaccine Material" in which he dwelt at length upon the variations in the age levels of susceptibility in the southern section as compared to other sections of the nation and to the possible

indications that priority should vary for the sections depending upon the incidence of poliomyelitis among age levels of children; in explanation of the intervening intervals for the administration of the vaccine in the quantity recommended at the national level; in regard to the distribution of the supply of the vaccine; upon the views expressed in a National Conference on Poliomyelitis held in Washington in late April on the invitation of President Eisenhower; and, of reporting this with a recommendation to Governor Luther H. Hodges that he designate and appoint members to a committee to serve as public advisory body on poliomyelitis in North Carolina.

The Executive Council concluded to accept the report as information and not to undertake to establish a policy at this time.

President Owens: We will now consider the Application of the Executive Secretary.

Dr. Hill: Mr. President, and Members of the Executive Council, Jim Barnes has written us a letter with his qualifications. He comes up for re-election for three more years. I think all of us know him well enough that you wouldn't have to read the letter.

I want to say in his behalf that he is one of the grandest fellows to work with that I have ever seen. Hours mean nothing. Distances mean nothing. Time of the day means nothing. I have never seen as agreeable an individual to work with as Jim Barnes is, and I would like to see you all re-elect him for three more years.

Dr. Sams: I move that he be re-elected by acclamation.

[The motion was seconded by several.]

Dr. Koonce: He is the most loyal member of the North Carolina Medical Society, in my opinion.

Dr. Hill: I have never seen his equal in my life in anybody.

Dr. Faison: When did he have an increase in salary?

Dr. Hill: He came with us at \$4800, and over the past six years his salary has gradually gone up. It went to \$6500, then to \$7500, to \$8400.

The Finance Committee would recommend that his salary be increased, and this last time we were at the point of \$9000, and with nobody except him and his wife, he doesn't get much of that.

President Owens: Just one thing more. I want to verify exactly what Dr. Hill has told you. I find him to be a grand fellow to work with in every respect. He is making application for an additional three-year tenure of office.

[The motion was put to a vote and carried.]

President Owens: Item 17, discuss the indication for study of and establishing a policy on medical credit bureau operations in North Carolina for the guidance of the membership.

Mr. Barnes: Gentlemen, what brings this up is a letter from the Federal Financial Recovery Service, Inc., that immediately brings it to a head, but it is based on some experience we are having of physicians throughout the State calling on us from time to time for information about reliable collecting services.

Of course, we have no criteria. We know that in High Point and Greensboro and Winston-Salem and now Raleigh, they have established what you would call a Medical Credit Bureau, which is connected with a national agency.

As far as we can learn, the operation of these groups has been in the interests of physicians and in the interests of physicians' public relations. On the other hand, there are numerous out-of-state, fly-by-nights, you might say, that come in and develop contracts with individual physicians and then exploit those for their own benefit. In one case, of a doctor up in Mount Airy, they had a series of accounts assigned to them. They made certain collec-

tions, and, under the contract, they are now demanding that he pay them for money that they have collected from his accounts. I mean they have all the money they collected, and yet they are making demands on him for additional sums because they have collected that sum of money. It is the most ridiculous thing you have every heard of in your life.

It seems to me that this is important enough that there ought to be some sort of consideration in the way of a committee to study this thing and to come up with some sort of a recommendation for the guidance not only of agencies that are legitimately engaging in that field, but for the guidance of doctors.

For instance, in the case of one doctor, I understand from him that they collected a number of his accounts, and he never heard anything from them. He has no return from them whatsoever. And that thing is going on, apparently, in a lot of sections of the state.

Dr. Sams: About fifteen years ago, I had a similar experience. I gave a man \$4000 or \$5000 worth of accounts, and I never did get a penny from him.

Dr. Smith: They come in, some of them, and get a 50 per cent commission. You think it is 50 per cent of what they collect, but it is 50 per cent of the accounts you turn over to them. When they fall short of the 50 per cent, they call on you for the balance to give them their 50 per cent. That data has been published in *Medical Economics* on two or three occasion.

Mr. Barnes: Have you any observations about the firm that operates in Greensboro and is going into High Point?

Dr. Smith: I had a letter from Jim asking about a particular company in Greensboro. I called our credit bureau there to find out. There is a National Association of Commercial Credit Bureaus such as is found in most large communities all over the country. They run by a Code of Ethics, but they don't hesitate to put on or take off kid gloves and be a little rough if they need to.

Then there is a smaller group of what is called the National Association of Medical-Dental Collection Bureaus that has sprung up with a more kid-glove approach.

In North Carolina, I understand that there are four of these credit bureaus that have adjusted part of their work to fulfill the requirements of the Medical and Dental Code of Ethics. We happen in Greensboro to have one of them. Charlotte and Winston have got the others. That is all right for that particular community, but if I happen to have a bill against a patient in, say, Wilmington, and they don't have that type of agency there, my medical-dental agency shoots it on down to the regular credit bureau in Wilmington and they handle it in the usual manner. It is more a question of the local collection agency being aware that there is a need by the doctors and dentists locally for them to make certain adjustments in their usual collecting procedures.

[Dr. Paschal in the Chair.]

Chairman Paschal: Gentlemen, what would you like to do about this?

Dr. Sams: I move that it be referred to a committee appointed by the President to investigate and report to the next meeting of the Council.

[The motion was put to a vote and carried.]

Chairman Paschal: We will proceed to the Progress Report, Division of Health Affairs, University of North Carolina.

Mr. Barnes: Mr. Chairman, the Medical Society originally contributed much to the development of the Division of Health Affairs of the University of North Carolina; so this report came to the Society as an official report about ten days ago. It is a progress report.

A PROGRESS REPORT

The Division of Health Affairs

The University of North Carolina, Chapel Hill
An Excerpt from President Gordon Gray's Annual Report for the three-fold University of North Carolina for the year 1953-54
The Division of Health Affairs

The last President's Report touched only briefly on the Division of Health Affairs. This report will discuss in more detail the activation and present operating status of this important new segment of the University of North Carolina in Chapel Hill.

The Division of Health Affairs consists of the Schools of Medicine, Dentistry, Pharmacy, Nursing and Public Health and the North Carolina Memorial Hospital. It functions under the direction of a full-time Administrator, Dr. Henry T. Clark, Jr., who is responsible to the Chancellor at Chapel Hill. Its budget is distinct from that of the main University in Chapel Hill, one direct appropriation being made by the General Assembly to the teaching units of the Division and another appropriation being made to the North Carolina Memorial Hospital.

The Division of Health Affairs has come into being as one consequence of the 1946 report of the North Carolina Hospital and Medical Care Commission, a citizens' committee appointed by Governor Broughton to study the health needs of our State. The action program recommended by that Commission—the construction of many new community hospitals and health centers throughout North Carolina, the large-scale extension of prepaid health insurance among the people of the State, and the establishment of a Health Center at the University in Chapel Hill—is now in the process of being realized.

With regard to the University phase of its 1946 report, Governor Broughton's Commission urged that the existing two-year School of Medicine be expanded to provide a full four-year course, that a teaching hospital of appropriate size be constructed, that a new School of Nursing be established and that these new programs be integrated with the well established programs of the Schools of Pharmacy and Public Health. Some months later and following a study stimulated by leaders in the North Carolina Dental Society, a new School of Dentistry was included in the plans for this Health Center.

In the course of its studies, Governor Broughton's Commission established two primary objectives for the proposed Health Center at the University. In the first place, the University was to be a primary training center for professional and technical personnel in all health fields for service in North Carolina. Indeed, it would be the only training point in North Carolina for dentists, pharmacists and several categories of public health personnel. In the second place, the University should have a continuing interest in the quantity and quality of health care services available throughout North Carolina and engage in appropriate activities to raise those services to optimum levels.

On a wave of considerable popular support starting in 1946 and with the backing of sympathetic General Assemblies of 1947, 1949, 1951 and 1953, the Division of Health Affairs of the University of North Carolina has been brought into being.

The first step in a capital expense program of approximately \$14,000,000 was taken in the early fall of 1949 with the start of construction of the main unit of the North Carolina Memorial Hospital.

During the early part of 1950, a Division Administrator, a Hospital Director, a Dean for the School of Dentistry and a Dean for the School of Nursing were appointed, and shortly thereafter these new

people, together with the Dean of the School of Medicine, began to assemble needed faculty and staff.

During the fall of 1950, construction was started on the School of Nursing and its dormitories and on the interns' and residents' building. In September, 1950, the first class of dental students was admitted. These students worked for two years in quonset huts and in the basic science laboratories of the School of Medicine. Construction of the School of Dentistry clinic building was not begun until well along in 1951.

In September, 1951, the first class of Nursing students was enrolled. In this period, too, construction was begun on an addition to the student infirmary and additions to the basic science departments of the School of Medicine.

In early September, 1952, the North Carolina Memorial Hospital began to accept its first patients. In late September, 1952, the School of Dentistry clinics were opened to patients and clinical instruction for dental students was begun. In mid-October, 1952, clinical instruction was begun for students of the School of Medicine. The first group of interns and residents had been on hand since the previous July.

During the late fall of 1952, the School of Nursing building and dormitories were completed and clinical instruction for students in this school was begun in February, 1953.

Paralled with this program of construction, and giving meaning to it, there was an orderly build-up of teaching, service and research staffs. The new people, drawn from all parts of the United States, were concerned first with equipping the buildings, then with planning new curricula and service programs, later with the instruction of students in their new clinical programs, and finally with the initiation of extensive research work in the health sciences.

The fiscal year 1953-54 found the Division of Health Affairs proceeding rapidly toward full activation.

The *School of Medicine* graduated its first class of 48 students in June, 1954, and had accepted a class of 66 first-year men for admission in September, 1954. All but a handful of the students in this school are North Carolinians. A number of new appointments were made to the faculty of this school during 1953-54 and at the beginning of 1954-55 almost all authorized positions were filled.

The *North Carolina Memorial Hospital* had 247 beds in operation at the close of 1953-54 and was running an average daily bed census of 185. In addition, the monthly out-patient visit rate had reached 4,000 by June, 1954. Though patient demand to that point is probably all that could have been expected, the best functioning of the teaching programs in Medicine and Nursing and the economy of the Hospital require a moderate increase in patients. It appears that the patient service programs have gained widespread popular approval.

The *School of Nursing* had three classes of students in residence during 1953-54 and this School will graduate its first class of 17 students in June, 1955. It accepted 71 new students for admission in September, 1954. A considerable sum of scholarship money from the Medical Foundation of North Carolina has been of real assistance to this school in obtaining a proper student enrollment. The School of Nursing expects to inaugurate an M.A. program in September, 1955, with the aid of funds provided by the Kellogg Foundation.

The *School of Dentistry* graduated its first class of 32 dental students in June, 1954, and accepted 50 students for admission to its first-year class in September, 1954. In June, 1955, it will graduate its

first class of dental hygienists. Except in one or two special fields, the dental clinics were functioning at capacity by the end of 1953-54 and there was a waiting list of patients in several fields. Construction of graduate and post-graduate facilities will be completed during the fall of 1954 and these facilities will be put into operation immediately on their completion.

The undergraduate and graduate programs in the *School of Pharmacy* functioned as usual during 1953-54. As in recent years, enrollment was seriously limited by available physical facilities (63 freshmen are to be admitted in September, 1954) and the number of graduates was again far below the demands of the State. The urgent need here is for a new School of Pharmacy building. This has the top priority of the University in Chapel Hill in its request to the 1955 General Assembly for capital improvements.

The *School of Public Health* functioned as usual during 1953-54. It will admit 78 students in September, 1954, a moderate drop from its average of the last few years. Many of the students in this school are supported with federal or agency funds and the reduction in availability of these funds for 1954-55 probably accounts for the reduction in student body. This school is anticipating beginning work shortly on a three-year contract with the U. S. and Peruvian governments covering assistance to be given Peru in the field of sanitary engineering. A continuing urgent need is for a new School of Public Health building.

There are three special developments worthy of note which had their beginning prior to 1953-54 but which reached a point of beginning fulfillment during 1953-54.

First, in late 1953, the *Gravelly Sanatorium*, located adjacent to the North Carolina Memorial Hospital, opened for patients. All of its 99 beds were in use by June, 1954. This Sanatorium is administratively a part of the North Carolina Sanatorium system but, as a result of negotiations conducted during 1953-54, the professional care to patients is provided primarily by members of the School of Medicine faculty. The resources of *Gravelly Sanatorium* are available for the teaching of medical, nursing, and other Health Affairs students, and there is a close integration of research programs. Altogether, this seems a promising venture for the parties concerned as well as an economical move for the State.

Secondly, conferences involving representatives of the State administration, the Hospitals Board of Control, and the University culminated during the summer of 1954 in a joint plan for activating and operating the *Psychiatric Center* of the North Carolina Memorial Hospital. This Center, which includes beds for 72 patients, is being constructed with State funds appropriated to the Hospitals Board of Control but transferred by that Board to the University. It is expected to be completed in November, 1954, and it will probably be opened for patients in late 1954 or early 1955. This unit will be operated administratively by the University. It is designed primarily as a teaching and research unit, and it is expected that urgently needed staff for the mental hospitals throughout the State will be trained in this unit.

A third development of broad significance has been the *rapid enlargement of research programs* in the Division of Health Affairs to the point where approximately \$1,000,000 in research contracts were held at the end of 1953-54. In an over-all sense, these research programs bolster and enrich our teaching and service programs but they also make problems by their demands on facilities and on the time of teaching and service personnel.

Looking into 1954-55, when the Division of Health Affairs will approach full operating status, there will be approximately 1,000 students, including some 80 interns and residents, in training in various Division units. (This student number will rise to approximately 1,200 during the next biennium.) During 1954-55, too, there will be approximately 200 full-time faculty members, a similar number of part-time faculty members and approximately 1,000 other staff members at work in the Division—teaching the students, caring for patients in the Hospital and in the Dental Clinics and supervising research activities.

Looking ahead, too, the operating budget for 1954-55 for Health Affairs will approximate \$6,000,000. Of this amount, about \$3,000,000 will be required by the North Carolina Memorial Hospital, \$1,000,000 by the teaching programs of the School of Medicine, \$1,000,000 by the teaching programs of the other four schools and \$1,000,000 (almost exclusively from gifts and grants) by the research programs in the several schools. Of the over-all \$6,000,000 budget, about one-half represents State appropriations and one-half is derived from receipts from Hospital and Dental patients, from tuition and fees of students, and from gifts and grants from foundations and agencies.

Altogether, the Division of Health Affairs has now become a major segment of the University of North Carolina and a vital force in the life of our State.

As might be expected, no program of the size and complexity of the one under discussion could have been activated without headaches and heartaches. There have been many of these. However, it appears that the Division of Health Affairs is well along toward developing a program of which the University and the people of our State can be proud.

The major *problems* of the recent past have centered around: (a) public criticism of the School of Dentistry private practice program by a considerable number of practicing dentists throughout the State; (b) administration of the private practice program of the clinical faculty of the School of Medicine; (c) resolution of technical points surrounding the supplementary compensation of the clinical faculty of the School of Medicine; and (d) the slow rate of growth of the Hospital census and the high percentage of part-pay patients, which, taken together, have produced serious problems of Hospital financing.

The major *needs* in addition to those already cited are: (a) additional faculty to serve primarily in specialized areas where teaching and patient care programs cannot be handled by one man as at present; (b) full-time assistance to the Division Administrator in the fields of public information, program planning, and daily routine operations; and (c) new facilities to house the growing research programs.

The major *opportunities* of the Division of Health Affairs appear to be: (a) the planning and initiation of further activities which will carry the benefits of our University health program to all parts of the State; (b) the development of a broader program in the field of rehabilitation; (c) the promotion of the Medical, Dental, and Pharmaceutical Foundations in their work to serve the growing programs of the Division of Health Affairs; and (d) greater integration of the teaching and the research programs of the division of Health Affairs so that the faculties and students of the several units will draw greater benefits from each other.

Dr. Smith: I move that its receipt be recognized.

[The motion was seconded by Dr. Ormand.]

[The motion was put to a vote and carried.]

Mr. Barnes: Mr. Chairman, we come next to the compilation of annual committee reports. The Committee on Blood Program, of which Dr. Paul Kimmelstiel is Chairman, has developed a supplementary report which Dr. H. L. Large is here to present.

Dr. Large: On April 19, a meeting was held in Charlotte of the Steering Committee, attended by authorized members of various interested groups. The following were present:

Dr. Ivan Brown, Durham
Dr. W. H. Christian, Asheville
Dr. Thomas Wilson, Raleigh
Dr. H. L. Large, Charlotte
Dr. Paul Kimmelstiel, Charlotte
Dr. J. G. Palmer
Mr. J. P. Richardson
Mr. Ed Fry
Dr. Joseph Hertell, Atlanta
Dr. John R. DeVelling, Charlotte
Mr. R. C. Nicholson
Dr. C. M. Kendall

It may be stated without reservation that in general all members expressed their sincere interest in seeing a plan of statewide blood bank systems materialize. Constructive suggestions and offers for active assistance were made by the representatives.

A. Red Cross: Assured us of their continued interest in maintaining the activities of the established regional blood bank centers which cover approximately 45 counties of the State. In addition, it expressed its willingness to assist through their chapters of volunteers in the establishment of additional small or large blood banks in areas not yet covered by their regional banks.

B. Civil Defense: Through Mr. Nicholson of State Civil Defense and the Emergency Medical Care Committee of the State Society, by letter from Dr. Royster, assured us of the availability of Federal funds on a matching basis for stockpiling, use of equipment, and training of technical personnel. Such funds can be granted to all institutions which are not privately owned and may be helpful in the establishment of adequate facilities in such hospital banks not yet fully equipped.

C. The Medical Schools offer their facilities for training of technical personnel without cost and consulting service in blood matching problems for the state system.

D. The North Carolina Hospital Association stated its desire to cooperate fully. Mr. Richardson was confident that the hospitals would participate in sharing the cost by dues or on a pro rata basis.

E. The State Health Department expressed its willingness to assist in procedures of standardization within the limits of its budgets on a part-time basis.

When the meeting started, it was evident there were existing differences of opinion as to whether we should have centralized blood banking or decentralized, but after a considerable discussion, there was unanimous agreement on the following points:

1. To establish blood bank centers on a community or district level according to local circumstances and density of population. The present large Red Cross regional banks are to continue, however, to function as unit members integrated into the over-all state system, provided their chapters desire to remain in the Regional Red Cross block.

2. To establish a central clearing office with full-time director of a state blood bank system for the specific purpose of, and responsibility for, the maintenance of a standardization of blood

bank members, regulation of interchange of blood between units or districts according to needs, professional and technical education, and purchase of equipment.

The committee is now in the process of working out the plan for a blood bank system based on these agreed principles. This plan is to be submitted to the Executive Committee of the State Society.

We could not present a more concrete plan because we were not able to get all of these people together until mid-April for the initial meeting.

It would, however, be desirable to include in this plan a procedure for the initiation which requires extensive survey of local county conditions. For this reason, we respectfully resubmit our recommendations to the Executive Council for approval in principle, specifically for approval to cast tentatively for financial subsidies for the period of initiation. We believe that the Charlotte meeting has given every indication for full support by hospital associations, Red Cross, Civil Defense, medical schools, and state departments.

This is respectfully submitted by Dr. Paul Kimmestiel, who is sorry he cannot be here because of pressing personal affairs.

It was suggested in our original report that we might approach the Commonwealth Fund of the Rockefeller Foundation. It has been indicated to us that they might be interested in providing funds for such a survey and perhaps even for the initial institution of a blood bank program if we can resolve a concrete plan. Someone in this committee at the time suggested that there might be funds from the State. I don't recall the organization at the time that might have them, but I believe it was in Greensboro. Thank you, Mr. President.

Dr. London: I move that we approve the report of the Blood Bank Committee and request that they proceed with the implementation of their program.

[The motion was seconded by Dr. Smith.]

[President Owens resumed the Chair.]

President Owens: This is a supplemental report, is there any further discussion?

[The motion was put to a vote and carried.]

President Owens: Gentlemen, last Sunday, President-elect, Dr. Rousseau, Secretary, Dr. Hill, Executive Secretary, Jim Barnes, and I, met in the office in Raleigh from eleven o'clock in the morning until eight-thirty at night, and we went through this whole report (compilation) and pointed out a few things which might be in controversy and marked them. What is your pleasure? Will you accept our interpretation of what might be controversial or questionable or pointed changes to be made, or do you want the whole thing read?

Dr. London: I move that we trust our Executive Officers.

Mr. Barnes: Will you refer to the Seventh District Councilor's report by Dr. Ormand on page 7? In the last paragraph, we want to substitute Dr. Leslie Morris' name. We got the wrong name in and we say that is corrected here.

Then, on page 51, the report of the North Carolina Medical Care Commission, in enumerating the Hill-Burton Act proposals, you will notice that it enumerates "Diagnostic or treatment centers for ambulatory patients." That sort of raised a little question in the minds of some of the committee as to whether or not that meant clinic facilities for private patient treatment being taken over by a public facility.

Then, it says, "However, there is a disproportion in the availability of medical facilities and medical services between rural and urban communities, and between high and low-income counties. A need exists for facilities for the diagnosis or treatment of ambulatory patients, particularly

in the rural counties, for the care of patients suffering from chronic illness, for rehabilitation facilities, and for nursing homes, providing services under medical supervision."

There was some question about whether that would be accepted as information rather than to be approved.

Dr. Smith: They are reporting what the Medical Care Commission has done and what their objectives are. It might be well to simply accept the report and not approve it.

Dr. Koonce: I move that we accept that individual report as information.

[The motion was seconded by Dr. Reece, was put to a vote and carried.]

Mr. Barnes: Then the information about the American Medical Education Foundation. It says it was organized in 1951 and that our three medical schools have received a total of \$218,442.10 in cash grants. It goes on to say, "North Carolina doctors, however, contributed less than \$6000 to the American Medical Education Fund over the same period of time."

There was some question as to whether or not you want to leave that in the report unexplained, inasmuch as perhaps a good many of the doctors in the State have supported in direct contributions to their own Alma Mater, and have given sums much in excess of \$6000 shown on the books of the American Medical Education Foundation.

Dr. Smith: Mr. President, this should be called to their attention again. You can still contribute to your own Alma Mater and send it through the AMEF and get credit there, and it goes on without any deduction for handling. It should be brought to their (members) attention each year until they realize it.

President Owens: I talked to Dr. Reece Berryhill about this matter, and he told me that the medical schools received three different funds. They received, (1), Each medical school received an outright grant of \$15,000 from the American Medical Education Foundation; (2), they received an additional \$25 for each student they have in the medical school; and, (3), they received all the money that contributors made to the Education Foundation of the American Medical Association which was earmarked for a specific school. He further pointed out that if a contributor made a direct contribution to the medical school, the medical school could take the money and use it and send that doctor's name and the amount on to the American Medical Education Foundation Secretary, and the doctors of North Carolina would get credit for it.

As he pointed out to me, he would like very much to have that money for use all during the year, that is the contributions the doctors made to the American Medical Education Foundation earmarked for the different medical schools. Otherwise it was all collected and held and it was sent to them once a year.

President Owens: When I mentioned the small amount that the North Carolina doctors had contributed, Dr. Berryhill told me he was sure that the doctors had contributed much more than that, and he told me he tried to find out from Dr. Davison the exact amount that North Carolina doctors had contributed.

Dr. Rousseau: I believe that North Carolina doctors are not getting credit at the American Medical Education Foundation headquarters for money they send direct to the school, although the Dean or the office sends report of that to AMEF or notifies them how much it is. I don't believe, however, that they are getting credit, because certainly there is a big discrepancy, and it has put North Carolina physicians right at the bottom of the list. We ought

to get that straightened out and get credit for it somehow.

Dr. Smith: I move that the report be accepted in the hope that we will have a footnote of facts to be added to it.

[The motion was seconded by Dr. Faison, was put to a vote and carried.]

Mr. Barnes: Mr. Beeston, who represents the Hospital Saving Association, and who is the officer on the staff of the Hospital Saving Association who is responsible for the administration of the intermediary plan which the Medical Society adopted many years ago to provide a service of home town medical care for service-connected disabilities of veterans, is here at the request of Dr. Eben Alexander, who is Chairman of the Committee on Veterans' Affairs. His purpose is to present some information relating to a proposal of the Veterans Administration to revise the fee schedule in cooperation with that program, which we understand is upward. Dr. Alexander called me Friday and said that he would not be able to get here because of a series of cases in the hospital that he was responsible for, but he had gone over this with Mr. Beeston and it looked to him as if there was approximately 23 per cent increase in the fees proposed by the Veterans Administration.

If you recall, at a meeting of the Executive Council several months ago, the information appeared to indicate that the Veterans Administration was interested in absolving this contract, but since then a new medical director, I believe, has been appointed by the Veterans Administration, and his attitude is to continue and perhaps to encourage these home town service programs. Therefore, he has requested the Medical Society to continue its contract for an intermediary program, and he has gone back to this application for an increase in fees, which the committee was authorized to submit for the Medical Society more than a year ago, and has picked that up and is bringing it up to date for approval.

Mr. Beeston is here, prepared to discuss with you what is involved in that fee schedule, at the request of Dr. Eben Alexander, who is Chairman of your Committee. I believe that is about it.

President Owens: We will be glad to hear from you, Mr. Beeston.

Mr. Beeston: It is the opinion of Dr. Alexander's Committee that the cancellation of the intermediary function would tend to leave each physician dealing individually with the Veterans Administration reverting to the system in effect between World War I and World War II, in which one physician designated by the Veterans Administration would handle all VA cases in his area. Therefore, the committee believes that the intermediary function is of great importance in preserving the principle of free choice of physician.

For these reasons plus evidence of a new and more cooperative attitude on the part of the Veterans Administration, and because of the VA's offer to increase the 1946 schedule of fees by an amount averaging 25 per cent, the Committee recommends that the intermediary program be continued for the fiscal year beginning July 1, 1955, and that the new fee schedule be adopted.

This fee schedule is 22 pages in length with 25 to 30 items on each page. Jim, I would like to turn a copy of the complete schedule over to you, together with a copy of the report. However, most of these items on the schedule are not germane to the program.

The home care program falls into twelve or fifteen items of great significance. The Committee recommended to the Veterans Administration that psychiatric treatment be increased \$15 per half hour. That was denied by the Veterans Administration, and they kept that at \$10 per half hour. That

amounts to 11 per cent of the total program.

The fee for a general physical examination was increased from \$5 to \$7.50, an increase of 50 per cent. The general physical, together with a few dermatological, eye, ear, nose and throat, and so on, amounts to 11 per cent of the program.

Laboratory amounts to 4 per cent, and there is no increase in those fees.

Injections, mainly for desensitization, amount to 4 per cent of the program, and that fee was increased from \$2 to \$3.50.

Pneumoperitoneums were increased one-third, from \$7.50 to \$10.

The most frequent item is the office visit which accounts for 36 per cent of the whole program, and, together with home and hospital visits, amount to 45 per cent. Those fees have been increased from \$3 to \$4, or 33 per cent.

X-rays amount to 8 per cent, and physical therapy amounts to 2 per cent.

The schedule contains hundreds of surgical procedures which are never authorized, because the Veterans Administration policy now is to put all serious cases in Veterans Administration hospitals.

We do, I think, render a valuable service in that if some of the Veterans Administration's strange feelings have an adverse effect on one physician or one veteran, we find out about it quickly and go to bat for doctors collectively. The attitude of our Board of Directors is that we will continue to do this as long as the Medical Society wants us to do it and as long as it is a service by veterans or doctors. We do not profit from the program, and we are administering and serving on a cost basis.

Mr. Barnes: Were there any fees diminished by the Veterans Administration on this list?

Mr. Beeston: No, sir. There may be a stray or two in the surgical category, but I cannot detect it, and it would not be important.

Mr. Barnes: Any changes are upward?

Mr. Beeston: They are either the same or upward.

There is one other thing I should mention. The committee in its proposal to the Veterans Administration included a provision whereby physicians with American Board ratings would get a 25 per cent additional fee. The Veterans Administration declined to accept that, saying that was contrary to their national policy.

Mr. Barnes: Have they ever paid on that basis?

Mr. Beeston: I understand that they do in consultation work.

Mr. Barnes: Have they in North Carolina?

Mr. Beeston: That is a national policy. A consultant of the Veterans Administration gets a higher per diem, but it is not applicable to the fee basis services.

Mr. Barnes: That is about what is involved.

President Owens: Thank you, Mr. Beeston.

That is the recommendation of the Chairman of the Committee.

Dr. Sams: I moved that we accept it, and it was seconded by Dr. Smith.

[The motion was put to a vote and carried.]

Mr. Barnes: On page 12 of the compilation—I think you have already discussed that here today, Dr. Smith, but there was some annotation made here that there should be a discussion of this table of information proceeding from the top of page 12. That is what you discussed here today?

Dr. Smith: Yes.

Mr. Barnes: I believe you received the report of Dr. Smith today, and he is to take care of it in the House of Delegates tomorrow.

Dr. Smith: May I make one remark? The Committee thought it would probably be well, because this thing has got to get to the individual doctor, if we tried to reduce this more briefly in writing, at least the salient parts of it, and submit it to

the State Journal, hoping the Editor might see fit to publish it so that the doctors can sit down and mull it over and study some of these figures and come to their own decisions about it.

Mr. Barnes: We simply wanted to add, Dr. Owens, that you had conducted these East and West Rural Health Conferences with some degree of success, and that is in the auxiliary report.

The Coroner System, to it there should be added that a bill in the General Assembly was given a favorable report by the House Committee the 21st day of April and was considered by the House on Tuesday, with a thumping majority in favor of the bill, and it is now in the Senate Committee, and I understand a hearing is to be held this week while we are up here, so there is some prospect of that bill being enacted, and it is the first progress that has ever been made beyond being referred to a study committee in the House. The bill provides for the establishment of a medical legal examiner system for counties whose county commissioners desire and elect to do so.

That supplement should go in his report.

Next is the Committee on Post-Graduate Medical Education. The report reads: "Because of the newness of this medium"—speaking of television—"it is our recommendation that a special Television Committee be appointed to get information and explore the potentialities." The Committee thought that the present Committee on Audio-Visual Post-Graduate Instruction should be that Committee, and we ordered this report annotated in that respect.

Dr. Koonce: I move that the recommendation be accepted.

[The motion was seconded by several, was put to a vote and carried.]

Mr. Barnes: On page 44, there appears the report of the Committee on Cancer. On page 45, the third paragraph, it was felt probably should be considered. We hoped Mr. Anderson would be present, for we wanted to ask him about the implications of restraint of trade. I will read it, and let's see what you think of it:

"The Cancer Committee made the following recommendations to the North Carolina Board of Health, in answer to the request of Dr. A. H. Elliot, for such recommendations:

(1) That all hospitals approved by the State Board of Health for the treatment of indigent cancer patients, and those hospitals which co-share the facilities of diagnostic and x-ray surgery, x-ray and radium therapy with such hospitals, be also approved. (2) That recommendations be made to the North Carolina Board of Health that only qualified men be approved by the State Board of Health to participate in the care of indigent cancer patients, and that by qualified it be meant diplomates of the American Board or Fellows in the American College of Surgery or the American Radiological Society, or other respective colleges and boards.

"A suggestion was made that the incoming President, Dr. Rousseau, be requested to reappoint as many members of the present Cancer Committee as possible, so that the work started at this meeting may be adequately organized and continued during the next twelve months.

"It was suggested that another meeting of this Committee be held, as soon as the recommendations to the Survey Committee of the North Carolina Division were published. Dr. Elliot thought that the State Board of Health should be asked to attend the meeting."

Dr. Rousseau: Mr. Chairman, I think the question that was brought up there was, is that discrimination against qualified physicians and surgeons who are qualified to treat cancer although they are not Board qualified?

Dr. Smith: I move that we recommend to the House of Delegates the adoption of the report with the omission of that portion of the second recommendation in reference to qualifications.

[The motion was seconded by Dr. Rousseau.]

President Owens: Is there any further discussion?

[There being no further discussion, the motion was put to a vote and carried.]

Mr. Barnes: The next one is the Committee on Occupational Health. There are two matters of importance so far as work of the Committee is concerned that need amendment. One, the Committee should be enlarged. Two, the matter of approval of "guiding principles of occupational medicine." In regard to the matter of membership on the Committee, it is the recommendation of this Committee that future membership be increased to a total of 15 physicians with one representative from each of the following specialties:

1. General Surgery.
2. Internal Medicine.
3. Neurosurgery.
4. Eye, ear, nose and throat.
5. Dermatology.
6. Orthopedics.
7. Radiology.
8. Psychiatry.
9. Obstetrics and Gynecology.
10. Pathology
11. A teacher in the Department of Preventive Medicine from one of the medical schools, and that the remaining members be selected, two from each of those doing Industrial Medicine as a specialty and two General Practitioners.

That wherever practicable, one member of the Committee shall come from each Council District, and that three members be appointed for one year, three for two years, three for three years, three for four years, and three for five years, and thereafter each year three for five years.

That is the recommendation with reference to the structure and tenure of membership on the Committee.

Then the second item says: It is further recommended that the action approving our version of the "Lake County Code of Ethics" approved last year by the House of Delegates be rescinded, and that "Guiding Principles of Occupational Medicine" as proposed by the Council on Industrial Health of the American Medical Association be adopted.

Then there is an attached copy of that which runs from page 24 down to the top of page 28. That has been adopted by the American Medical Association Council on Industrial Health.

Dr. Smith: I move that the report and recommendations be approved.

[The motion was seconded by Dr. Sams.]

[The motion was put to a vote and carried.]

Mr. Barnes: The Committee on Tuberculosis, the final paragraph states:

We are aware of the move that has been pushed by the Tuberculosis Association to get routine general hospital admission x-rays and agree it would be an excellent thing. The Committee commends to the State Medical Society that it go on record as approving such a procedure.

President Owens: We wondered if that wasn't an imposition on the patient, an additional burden, from the standpoint of abuse and cost-wise.

Dr. Smith: It would certainly be an extra load on the insurance programs.

I move that we go on record as recommending that this recommendation not be approved, because of its cost, relying on the judgment of the attend-

ing physician when he feels it necessary.

[The motion was seconded by Dr. Sams.]

[The motion was put to a vote and carried.]

Mr. Barnes: The Committee Advisory to the Student AMA makes no report, and the question arose with the Committee in Raleigh reviewing these reports whether or not the Council should recommend that an appropriation be made to send a representative from the Duke Student Group to Chicago, with expenses paid by the Society.

Dr. Rousseau: I would like to discuss that just a minute. The President of the Bowman Gray Student AMA, about two or three years ago, said they wanted to go to the meeting in Chicago and didn't have any money, so I told them to go ahead, that I would pay his expenses. Well, he took five students with him in his automobile, and they all came back very enthusiastic about the Student AMA and have organized a strong unit at Bowman Gray. Now they are self-supporting and they don't need help. But they told me that the President of the Student AMA had no way of getting to Chicago and Duke had not been very enthusiastic. They wanted to know if the Medical Society wouldn't send the Duke boy up one year and get him fired up and then maybe he would come back and the Student AMA at Duke would do the same thing as at Bowman Gray. I think also that we ought to find out about the Student AMA at the University.

Dr. Koonce: I move that it come out of the Public Relations Fund and that the President of Bowman Gray Student AMA be financed, too, if they need it.

[The motion was seconded by several.]

[The motion was put to a vote and carried.]

Mr. Barnes: On page 58, in the Committee Advisory to the North Carolina State Board of Public Welfare, paragraph 3, at the bottom of the report:

Dr. Stanford discussed the problem of needy people not being hospitalized as needed and the fact that service varies widely throughout the State. He expressed concern for more equalization of opportunity for needed medical care. He reviewed his plan to encourage the medically indigent to buy as much insurance as possible with the difference between the insurance and actual cost of care being subsidized.

The review group didn't quite know what that meant and what the significance of it was.

Dr. London: Dr. Stanford prepared a resolution for the Durham-Orange County Medical Society which was adopted, to the effect that the Durham-Orange County Medical Society would present it to the State Medical Society. The resolution requested that they work toward the passage of legislation which would take care of the medically indigent people.

It was presented to the Durham-Orange County Medical Society, and the Secretary should have presented it to you to be taken to the House of Delegates.

President Owens: Do you wish to accept this for information on the assumption that Dr. Raney Stanford is going to offer this resolution?

Dr. London: I don't think we know enough about it to take any action.

Dr. Koonce: I move we accept it as information.

[The motion was seconded by Dr. Faison, was put to a vote and carried.]

Mr. Barnes: Mr. Chairman, I have just distributed to the Council a supplementary feature of the Compilation, which is Dr. Ed Hedgpeth's report as Medical Director of Hospital Saving, which he is required to make to the House of Delegates, so it is in the Compilation.

Dr. Smith: I move that the report be approved.

[The motion was seconded by Dr. Sams, was put to a vote and carried.]

President Owens: Miscellaneous Business.

Mr. Barnes: Dr. Koonce is here, and there is some thought that he should make a supplementary report on that press survey that has been authorized by the Council.

Dr. Koonce: Jim seemed to feel that I should make a supplementary report of the survey which has been conducted by the group at Chapel Hill along with the Public Relations Committee for which we appropriated \$1000.

We appointed an Advisory Committee under Dr. John Rhodes, of Raleigh, and they met with Dean Luxon (U.N.C. School of Journalism) and Professor Carter and developed this plan of procedure.

There was a general discussion of and review of the purposes of the proposed medical-press survey. It was agreed that the survey would cover six communities and that, instead of a community survey, it would embody the entire county where these communities are located. The following counties were selected: Durham-Orange, Mecklenburg, Forsyth, Buncombe, Lenoir and Craven. The first three were selected largely by design while the latter three were chosen at random. It was found that these counties would give a rather broad cross-section of the entire state.

The plan of procedure would be as follows: A pilot study would be done in Durham-Orange County through a mail questionnaire to physicians and newspapers. All daily newspapers and alternate weekly newspapers would be contacted. A one of nine test of physicians would be done. The questionnaire would then be followed by personal interviews. At the end of the pilot study, the committee would again meet for review of results. It is proposed that this pilot test be completed by the latter part of May. It is hoped that the procedure could be carried out in a second area, probably in Mecklenburg, in May and June. A general pre-test questionnaire would be sent to the remainder of the areas in June.

Completion of the interview work, compiling of data and composition of the final report, would begin in September. A deadline for the final report has been tentatively set as January 1, 1956.

It was suggested that an announcement of the proposed survey and its purposes and plan of procedure be made at the meeting of the State Medical Society. This could possibly be included in Dr. Koonce's report for the Public Relations Committee.

All members of the committee, including Drs. W. P. Richardson, C. T. Wilkinson, T. T. Jones, and John Rhodes, were present with Dean Luxon and Dr. Carter. It was agreed that the members of the committee, individually and collectively, would be available for consultation with Dr. Carter whenever problems arise. Dr. Jones indicated his willingness to co-operate in the pilot survey in Durham-Orange Counties.

There is one other thing I would like to get approved. Dr. Murphy and I had talked for a year or more about an organization of medical secretaries and office assistants, and I would like to ask, at his suggestion, approval of the organization of this group of medical secretaries and office assistants, for the implementation of that organization by the Public Relations Committee.

Dr. London: I move that the idea be adopted as a proposed movement of the Society.

[The motion was seconded by Dr. Raby, was put to a vote and carried.]

President Owens: Dr. Paschal has an additional report.

Dr. Paschal: This concerns the Loyalty Group Insurance. We have made our survey. We found that we did not receive 65 per cent (approximately 40 per cent) of the membership who indicated their

willingness to participate in this program. We have additionally investigated another company. They are offering to the membership, as I have indicated in this report, a policy that offers no particular advantage over the policies now in effect with most of the membership. The company that had indicated its willingness to write it is a small company with limited resources, and I question very seriously, even if 65 per cent of the membership had indicated their willingness to participate, that it would have been well to divorce ourselves from a company that is sound and obviously secure, and to urge our membership to participate in a contract with this other small company. The other company that is interested in selling this insurance to us on a so-called group basis has a sound financial situation, but they, too, want to sell additional types of insurance. Neither one of these offers us anything more than we have.

It has come to my attention in the last few days that there have been one or two members who feel that their insurance is about to expire and we are just going to automatically have to send them from this company with whom we have negotiated or talked about a new contract. I think that we ought to advise the membership, through some medium, that we are not in a position to offer them anything of that kind and that possibly our Public Relations News Bulletin would be sufficient.

In view of the fact that we know of no one in the State Medical Society at this time that desires insurance that is not able to obtain it—that was not true earlier in the life of this Committee, and our rate is very favorable for this section of the country—and I would therefore suggest that we continue under our present system with the active participation on the part of the State Medical Society to create what might be called a malpractice committee to work both at the state and local levels to help reduce the incidence of claims, evaluate their justification, and to help our membership in any way possible if a claim is put forward.

The establishment of committees on these levels would certainly be of advantage, and I see no reason why they cannot work with five insurance companies as well as working with one.

The committee I have in mind has broad functions and broad powers. At a local level, at the first indication of any claim or discontent on the part of a patient, it would automatically be referred to the Committee on a local level to be screened, reviewed, and all of its aspects gone into, and, if necessary, legal counsel sought at that time. We could determine whether or not the thing should be resisted or whether it should be settled or what not.

I don't have any definite program to present to you but I think that such a plan would have very favorable results.

Dr. Murphy: First, it is my interpretation of Dr. Paschal's remarks that we could not get the group insurance that we anticipated, because we did not get 65 per cent participation.

Dr. Paschal: That is correct.

Dr. Murphy: I think it should be made very plain to the membership of the Society that the reason the idea fell flat was because they didn't want it.

About the other thing about the investigation that we carried on shows one thing very plainly, that a vast majority, certainly a high percentage, of claims and subsequent losses, results from the careless remarks and poor judgment in public relationships of the doctors themselves. It has long been our contention, that the State Society could do something to educate the members.

I would like to move that we recommend to the House of Delegates that a special Professional Lia-

bility Committee be formed which will have two functions: (1) To organize and conduct a campaign of information and education so far as the membership is concerned in an effort to reduce liability suits and losses; and (2) that this Committee have the function of reviewing and assisting in defense of such claims as may come against the membership.

[The motion was seconded by Dr. Brinn.]

Dr. Smith: It was contemplated in the original recommendation that each local county would have a Grievance Committee for that particular purpose.

Dr. Murphy: That never was anticipated to be and never has been a function performed by the Grievance Committee at all except in a purely indirect way.

President Owens: All those in favor of receiving Dr. Paschal's report for information say "aye"; opposed, "no." The motion is carried.

Is there any further discussion of Dr. Murphy's motion.

[There being no further discussion, Dr. Murphy's motion was put to a vote and carried.]

President Owens: We will consider Unfinished Business.

Mr. Barnes: I have an application here for intern-resident membership from Donald Ewan MacDonald.

He wants this intern-resident membership which this Council has to approve.

Dr. Koonce: I move that if he has a full license, he be granted membership.

[The motion was seconded by Dr. Sams, was put to a vote and carried.]

President Owens: Consider New Business. Dr. Erbele's letter as to dues remission.

Mr. Barnes: I have a letter from Dr. L. A. Erbele, of Bowman Gray School of Medicine, reading as follows:

Dear Sir:

I have had a sudden change of plans, and will no longer be in practice. I begin a residency in pathology at Bowman Gray on April 1, 1955. I have paid my North Carolina State and AMA dues in the amount of \$65 through the McDowell County Medical Society, and if you are able to refund any part of them, I will be deeply grateful.

Dr. Raby: I move that half of it be refunded.

[The motion was seconded, put to a vote and carried.]

President Owens: Gentlemen, we will have a recess for ten minutes, and we will come back and take up Dr. Dorr and any other matters.

Dr. Faison: We are still under New Business. There is something I wanted to bring up, and that is the method whereby the new President is inducted into office. I think it is a shame that a handful of people in the room late Wednesday afternoon are all that are present when an occasion like this takes place. I would like to see it set in motion in some manner whereby the night of the banquet, either at the banquet or after the banquet, the new President would be inducted into office. I think more people ought to be there and it ought to be a bigger occasion.

Dr. Elliott: I agree with what Dr. Faison has said. The outgoing President has certainly gone through with all of his duties after the Tuesday night meeting is over, and I see no objection to allowing the incoming President to take over on Wednesday morning for that short session.

Dr. Hill: Mr. Chairman, how would it be to have three past presidents appointed as a committee to

explore the idea and then get the Committee on Constitution and By-Laws to draft whatever they think is proper? They have been through it and they know where it would best fit in the program. Suppose we make it the last three available past

presidents? I would like to make that in the form of a motion.

[The motion was seconded by Dr. Smith.]

[The motion was put to a vote and carried.]

[The Executive Council recessed at five-fifteen o'clock.]

MEETINGS OF THE HOUSE OF DELEGATES

Monday Afternoon Session, May 2, 1955

The first meeting of the House of Delegates of the Medical Society of the State of North Carolina, held in connection with the One Hundred and First Annual Session, convened in the Ball Room of The Carolina, Pinehurst, North Carolina, at two o'clock, the meeting being called to order by the President, Dr. Zack D. Owens.

President Owens: Gentlemen, the Meeting of the House of Delegates will come to order. We will ask Dr. G. Westbrook Murphy to give the Invocation.

Dr. Murphy: Our gracious Heavenly Father, from Thy inexhaustible store of courage and wisdom, we ask a generous portion on this occasion. In Thy mercy, see that we have the wisdom to know what is right and the courage to follow it out, in the name of Christ, our Lord, whom we worship. Amen.

President Owens: We will now call on the Chairman of the Credentials Committee, Dr. W. M. Johnson.

Dr. Johnson: Mr. President, we have not had time to tally every county yet, but there are 110 delegates checked in, which is a quorum.

President Owens: Thank you, Dr. Johnson. Dr. Hill!

Dr. M. D. Hill: Mr. President: At this time we will call the roll of the delegates.

[Dr. Hill called the roll.] A quorum was declared.

President Owens: Members of the House of Delegates: It is a great pleasure to present Dr. Westbrook Murphy, Speaker of the House of Delegates. [Applause]

The Speaker: Ladies and Gentlemen, the House of Delegates of the Medical Society of the State of North Carolina is now ready to begin business. The first item on the agenda is to request the constitutional secretary, Dr. M. D. Hill, to perform the function of introducing to you such distinguished guests as have honored us with their presence.

Dr. Hill: Dr. Gaines from St. Louis, will you stand? Mr. Tom Hendricks from the Council on Medical Service of the AMA. Dr. Otto Brantigan, of Ba Himove, Maryland. Our own Dr. Karl Pace, the national General Practitioner of the Year—if he is in the house, we wish he would stand. Mr. Speaker, that seems to be the list of the guests that we have at hand.

The Speaker: I shall now appoint the committee to consider the two addresses to be given by our President and report on the recommendations made by him. The committee will consist of Dr. Julian A. Moore, of Asheville, who will be the Chairman; Dr. T. P. Brinn, of Hertford; and Dr. George W. Paschal, Jr., of Raleigh.

We will now be honored by having the presidential address to the House of Delegates:

Mr. Speaker, Members of the House of Delegates: The time has come when I am to make a report of the activities of your Medical Society during the past year.

I have enjoyed the complete cooperation of the officers, and the Executive Council. I feel we have made much progress and accomplished a great deal.

Few of us realize the interest, time, energy and serious deliberation members of our fifty-three committees have given to professional and business matters of the Society. Their work and accomplishments are to be commended. The committee work of the Society is really the backbone of its existence and progress. I wish to personally thank every member of my committees for having served so faithfully and efficiently. To those who may be chosen in the succeeding year and in years to come, who will have these committee responsibilities, I say to you that not only is it your duty and obligation, but a rare opportunity which you will have to serve the profession and humanity.

It has been my happy privilege to have a close association with our able Executive Secretary, Mr. James T. Barnes, who has meant so much to this Society. Many things we have accomplished could not have been achieved without his close cooperation and his intelligent and energetic activity. I am happy to report that the Executive Committee has been able to secure his services for another tenure of three years. He has the confidence and respect of a most efficient and energetic office staff. Mr. Barnes has been most faithful in his service to this society.

Our Constitutional Secretary, Dr. Millard D. Hill, has served most efficiently. He is well informed in regard to all obligations and activities of the Society. It is amazing what a memory he has. He is literally a store house of knowledge pertaining to the past and present proceedings of the Society. He has efficiently and unselfishly given of his time and talent.

As you know, the Legislature has been in session this year. Our attorney, John Anderson, has demonstrated great interest, willingness, and foresight at all times in giving advice and cooperation in legal matters. It has been an unusual pleasure to work with one who has given such satisfactory service in the interest of the Society. Many times he has sacrificed other interests in order to give us the advantage of his service. In addition to enjoying our confidence and respect, he is held in high esteem by the legal profession and members of the Legislature. It is interesting to note that while he has been a member of our Legislative Committee, there has been no legislation passed which has been adverse to the best interest of our profession and common good of our people. The other members of the Legislative Committee have worked hard and diligently and given unstintingly of their time.

The year 1954-55 has been by far the best year in our field of public relations. It has become in-

creasingly important for us to improve our public relations. I wish to thank our committee. In addition to the wide distribution of the newsletter and the well done pamphlet material, the Public Relations Committee, for the first time, held a forum with doctors and members of the press, radio and TV, last fall at the Sir Walter Hotel in Raleigh. I was impressed by this meeting. It has brought about a better understanding between the profession and members of the press.

Our Public Relations Secretary, Mr. William Hilliard, deserves special commendation. His excellent display of publicity with our honored General Practitioner of the Year of North Carolina and of the A. M. A., Dr. Karl B. Pace, gave North Carolina and the profession as a whole throughout the Nation, more good doctor-patient relationship than has heretofore been effected by any previous practitioner chosen by the A. M. A. I was on the spot in Miami, Florida, and had the opportunity to watch Mr. Hilliard in action in setting up publicity with the Associated Press, United Press, International News service, radio and TV representatives. He handled this in a masterly fashion.

Our Mediation Committee has been active and has rendered us a great public service.

The results of the Rural Health Program is most stimulating. During the year the Annual Conference was held in Raleigh. It was well attended. In order to reach more of the rural areas, as an experiment, a conference was held in the East at Greenville and in the West at Asheville. Both of these meetings had excellent programs and were well attended. Those present were urged to go back home and serve as a spark plug to stimulate interest on the local level. I attended two of these meetings. Special commendation is due the Chairman, members of this Committee, Mrs. Annette Boutwell and all who participated. I am told by Mr. Aubrey Gates, Field Director on Rural Health for the A. M. A., that North Carolina ranks with the upper three states in rural health in the Nation. This is very gratifying to me.

There are other committees whose work is very commendable, but I have endeavored to point out a few of the Committees whose accomplishments this year has been most outstanding. There are many others worthy of mention, but time will not permit a complete review. You may read the reports in the August number of the Journal.

This Presidential year has been a busy one. I have tried, whenever feasible, to attend all meetings possible, medical and non medical, to which I received an invitation. Time, distance, and conflicts prevented me from attending other professional and non professional meetings I should have liked to have attended. Many of these meetings, where conflict in my schedule arose, were attended by your President-Elect and your Vice-Presidents who have given me their wholehearted support. I attended forty-one meetings which include seven meeting in other states. I traveled 10,822 miles by car and 10,240 miles by plane. It has been an interesting and informative year. It has been my aim and purpose to serve to the best of my ability. I have endeavored to discharge my duties with distinction, in keeping with the high office of Presidency of this Society.

I should like to make the following recommendations:

1. The financial condition of the Society is good and I recommend that the present system of financing of the Society remain in status quo.

2. I recommend that the present trends of medical services through public health agencies, the methods used and the implications of such, be con-

sidered seriously by the profession, with a view of preventing encroachment on the private practice of medicine.

3. I recommend that the committee continue to study the problem of professional liability group insurance in hope of gaining satisfactory protection for members of our Society.

4. I recommend that the present Rural Health Program be continued and be expanded to improve living conditions and general health of the industrial workers.

5. I recommend that the Public Relations Program be continued and expanded. It is recommended that the Public Relations Committee institute a program of lay education pertaining to medical matters, at the Parent Teachers Association and the various clubs.

6. I recommend cooperation with Blue Cross and Blue Shield agencies to stimulate more adequate medical and hospital insurance coverage, particularly for the low income groups. It continues to be our primary defense against those forces which seek socialization.

7. In regard to the doctors' plan, being fully cognizant and appreciative of the committee's diligent work, I have observed a seemingly lack of interest, and an apparent lethargy on the part of the agency selling the program, the public's willingness to buy, and lack of enthusiasm on the part of the medical profession itself. I believe a co-insurance plan, whereby the patient would pay 20% of the cost of hospitalization and doctor's fee, would be a more workable plan. This will have a tendency to correct many of the abuses of the Blue Cross-Blue Shield plan. In this manner we will not assume the whole obligation and we will be helping people help themselves. The premiums will be thereby reduced to the point where it will be more attractive. The benefits would, also, be greater both for the hospital and the doctor. I recommend the approval of such a plan.

8. Due to increase in population and industrial growth, I recommend that our Public Relations Committee make a survey of the trends related to these developments and what the profession in the State should be aware of and undertake to do in connection with it and to the end that the profession may gain a spirit of harmony, interest, and cooperation between management, employees, and physicians.

9. I recommend that the District Societies meet quarterly. With the rapid advancement of medical science and the technique involved in the practice of medicine, there is an ever increasing responsibility on the part of the district society for developing postgraduate courses and seminars. It is the duty and obligation of the district medical society to keep its membership well informed and to keep modern medicine modern. I further recommend that the district society keep the headquarters office well informed of its activities and programs throughout the year.

10. I recommend that a formal charter be issued to each district medical Society, similar to those issued to the county medical societies.

11. I recommend that a system of documentation be set up in the office of the Executive Secretary for the purpose of recording the charters issued to the component medical societies. It is requested that the Executive Secretary write the Secretary of each component medical society and get the information necessary for this purpose.

In conclusion, I wish to pay tribute to my friends and colleagues of Elizabeth City, Dr. E. H. North, Dr. L. Everette Sawyer, Dr. I. T. Blanchard, Dr. W. A. Hoggard, Jr. and Dr. Fred H. Salters, who

through pinchhitting for me, made it possible for me to give this service to our Society.

In turning over the leadership of this Society to our President-Elect, Dr. J. P. Rousseau, I do so with a great sense of satisfaction. Having been closely associated with him during the years of my service as a member of your Executive Council, and this year as your President, through his many years of service to the Society, he has already demonstrated his ability, his interest and his loyalty. I assure you that the affairs of the Medical Society will be in competent hands.

I, again, wish to express my appreciation and thanks to the Officers, the Executive Council, the Committees, the Constitutional Secretary, and the Executive Secretary. I, also, wish to express my appreciation for the privilege of serving as your President. I thank you. [Applause]

The Speaker: The President's address requires no action at the moment. We will now receive the report of our Secretary-Treasurer, Dr. M. D. Hill.

Dr. Hill: Mr. Speaker, President Owens, and Members of the House of Delegates: As Secretary Treasurer of the Medical Society of the State of North Carolina, it is a duty imposed by the By-Laws to bring to you annually a report on the general and fiscal operations of this Society. Therefore, this report will cover the last fiscal year, January 1, 1954, to December 31, 1954, while the report in reference to general account of activities will encompass the period of a year beginning approximately May 1 and extending to the current April 30th.

In line with my fiscal duties and responsibilities, I wish to report that all revenues rightfully accruing to the Medical Society of the State of North Carolina have been fully collected, accounted for and placed in the regular depository selected by the officials of the Society for its safety and security. All funds accruing have been accounted for through the established facilities of the Society. Moreover, the dispensation of all funds rightfully accruing to the Society have been satisfactorily accounted for in line with official authorization for their expenditure. During the year, I have found constant opportunity to work with Mr. James T. Barnes, the Executive Secretary, and his staff who have performed much of the detail involved in the accounting for the fiscal operations of the Society. It is again my conviction that every essential organization and effort in processing the membership in a just and equitable manner and the honest administration of the affairs and monies of the Society is beyond question in my mind. I sincerely believe our affairs to be in the best state in the history of the Society. I wish to observe:

1. The membership during the course of the year 1954 reached the all-time high mark of 2915, which was sufficient to maintain our national delegation at the level of three. As you can see, it came close to the mark at which the national delegation would reach four in number.

2. Membership at April 28, 1955, had reached 2735, which is a gain over the figure at the same date last year.

3. I am pleased to report that estimates of all sources of revenue in 1954 were reached and in some instances exceeded and current progress in the respect appears to be repeating last year's experience.

4. The over-all operation of the headquarters office has shown definite progress since my last report to you, particularly in the light of a legislative year, which sometimes has imposed extra

and largely unanticipated responsibility on the staff. I believe your headquarters office is performing the essential duties assigned to it and has effected responsibility with dispatch, efficiency, and with an increasing level of production. The Executive Secretary and his staff are entitled to our thanks for the manner of their service.

The report of the auditing firm of A. T. Allen and Company of Raleigh, North Carolina, which conducted an audit of the period January 1, 1954, to December 31, 1954, has been prepared and certified in line with their assigned duties as Certified Public Accountants. The report is herewith attached and will constitute part of this report of your Treasurer. I recommend that it be adopted.

AUDITOR'S REPORT MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, INCORPORATED

Raleigh, North Carolina

12 Months Ended December 31, 1954

OFFICERS

Dr. Zack D. Owens, President, Elizabeth City, N. C.
Dr. J. P. Rousseau, President-Elect,
Winston-Salem, N. C.
Dr. George W. Paschal, Jr., First Vice President,
Raleigh, N. C.
Dr. Elias Faison, Second Vice President,
Charlotte, N. C.
Dr. Millard D. Hill, Secretary-Treasurer,
Raleigh, N. C.
Mr. James T. Barnes, Executive Secretary,
Raleigh, N. C.

Chairmen and Members of the Finance Committee
Medical Society of the State of North Carolina, Inc.,
Raleigh, North Carolina

Gentlemen:

Pursuant to engagement, we have audited the books and records of the Medical Society of the State of North Carolina, Inc., Raleigh, North Carolina, for the period beginning January 1, 1954, and ending December 31, 1954, and present herewith our report.

Exhibits and Schedules

In presenting to you our findings, as the result of the audit, we have prepared four Exhibits and three Schedules, as enumerated in the Index, which are attached hereto as a part of this report.

Balance Sheet—Exhibit "A":

The first statement is a list of the Assets, Liabilities, Reserves and Net Worth, which we designate as Balance Sheet, December 31, 1954, Exhibit "A". This Balance Sheet has been divided into two sections. One contains the Current Operating Fund, which represents the Current Assets, Liabilities and Reserves, while the other has been designated as a Capital or Non-Operating Fund containing the office equipment owned and used by the Medical Society at estimated values established in a prior year, and at actual cost for purchases during the last five years.

The cash in the First-Citizens Bank and Trust Company, Raleigh, North Carolina, in the amount of \$2,649.80, was verified through a reconciliation of the balance as shown by the records of the Medical Society with a certificate which was obtained independently from the bank. This reconciliation is shown in detail in Schedule—1 of the report.

Accounts receivable in the amount of \$170.73 is shown on the Balance Sheet and, in the main, represents the total of several uncollected balances due for advertising in the State Medical Journal. As the

amount is relatively small and the accounts deemed "good," no verification of them was made.

The \$25.00 due from American Medical Association represents an over remittance of 1954 A. M. A. dues and will be reimbursed by them.

The investment in United States Defense and Savings Bonds is shown at cost value of \$90,808.00, in the Balance Sheet, and in detail in Schedule—2 of this report. This figure includes \$16,560.00 expended in 1954 for two (2) \$10,000.00 bonds and three (3) \$1,000.00 bonds. It will be noted in Schedule—2 that two \$1,000.00 Series "G" Savings Bonds matured at December 1, 1954. The proceeds of these two bonds were received too late to be included in 1954 receipts so were deposited in January 1955. The deposit of these receipts was verified. Since the proceeds were not received until 1955 the two bonds are shown with the other unmatured bonds in Schedule—2. The Series "F" and "J" Bonds have an increment in value, due to lapse of time since date of purchase, by approximately \$1,881.00; however, this additional value has not been taken into account in this report.

The office equipment and furniture shown on the Balance Sheet in the amount of \$12,436.92 is listed in detail in Schedule—3. This represents an estimate made in a prior year and adjusted for purchases made during the last six years. The items shown herein represent cost value of the equipment of the Medical Society. As there were no Liabilities outstanding against this equipment, we have shown the entire amount as Net Worth—Capital Fund—in the Balance Sheet.

Under the "Liabilities" section we have listed those accounts, expenses, etc., incurred prior to December 31, 1954, for which statements or accounts were rendered or for which payment was due. "Refunds Payable" in the amount of \$6.50 represents the amount of reimbursed expenses overpaid by two members and which were still held in credit escrow at the end of the year. "Due Hospital Savings Association", \$80.70, is the amount withheld from employees' salaries under a group plan and is to be paid to the Insurance Company. The pay roll taxes, \$75.62 for Social Security and \$446.20 for Withholding, were paid during the course of the audit.

The deferred credits of \$2,010.00 are for payments made on technical exhibits space at the 1955 Convention in the amount of \$2,000.00 and 1955 Journal advertisement in the amount of \$10.00. These remittances were received in 1954 and will be transferred to their respective income accounts in 1955.

The Reserve for Mental Hygiene of \$2,866.22 is a reserve in the process of being built to an amount of \$5,000.00 to cover expenses and costs of the said committee in its rehabilitation work. To the balance in this account at January 1, 1954, of \$2,494.50 was added the unexpended Budget Appropriation of \$371.72 in 1954, resulting in the balance at December 31, 1954, of \$2,866.22.

The Reserve for Robert Taylor Scholarship Fund of \$600.00 represents a reserve for the 1954 Essay Contest Winner, Robert Taylor, Siler City, N. C. This amount is held in escrow for payment to a college which he chooses upon graduation from high school.

The "Net Worth" section of the Balance Sheet is comprised of two figures: \$87,608.29 being the balance of the Current Operating Fund for the year; and \$12,436.92 representing the balance of Capital Fund.

Analysis of Net Worth—Exhibit "B":

The second statement is an analysis of the changes in Net Worth during the year.

The Current Operating Fund balance was arrived at by adding to the balance January 1, 1954, of \$80,228.77, the amount of Net Income from operations for the current year—\$9,113.44; then deducting therefrom Expenditures for Capital Assets, \$1,362.20 and allocation to Reserve for Mental Hygiene Committee, \$371.72.

The Capital Fund Net Worth balance is derived from adding purchases during the year for Capital Assets in the amount of \$1,362.20 to the balance January 1, 1954, of \$11,074.72.

Statement of Income and Expenses—Exhibit "C":

A statement showing a budget comparison of the income and expenses for the twelve-months period has been shown in Exhibit "C". This statement is, in effect, a statement of operations for the year, and by examination it will be seen that the revenue or income of \$130,162.30 exceeded the expenses of \$122,411.06 by \$7,751.24. However, there was included in the expenses \$1,362.20 in Capital Expenditures for equipment. Eliminating these we show income from operations of \$9,113.44, which has been added to the unexpended balance of the Current Fund and shown in the Net Worth section of the Balance Sheet. In comparison with the budget, actual income was more than the budget anticipated by \$16,491.30. The main items accounting for this seem to be, upon analysis, \$8,172.00 more realized than expected from Membership Dues, \$2,894.00 more from Sale of Exhibitors' space, and \$3,511.00 accumulated interest on United States Savings Bonds which matured during 1954. Further examination shows that the total actual expenses were \$74.06 more than the budget provision. The Journal Budget and the Annual Sessions (100th) Budget were the main factors in this deficit. The excess of \$5,142.75 in the Journal Budget was due mainly to the \$6,603.76 excessive cost of publishing the Journal, and the excess of \$2,982.51 in the Annual Sessions (100th) Budget was caused by the \$1184.46 excess in the costs of the Booth Installation and the \$2,115.39 excess cost of rentals for Sections and Exhibits. The Annual Sessions deficit was caused by the museum display which was authorized subsequent to the adoption of the Budget.

Cash Receipts and Disbursements—Exhibit "D":

A statement showing in detail the cash receipts and disbursements of the Medical Society during the year under review has been shown in Exhibit "D" and may be summarized as follows:

Cash Balance January 1, 1954	\$ 3,369.03
Cash Receipts During the Year	199,488.05
Total Cash Available	\$202,857.08
Less: Disbursements During the Year	
For Operations	\$123,607.58
To A. M. A.—Dues	58,677.50
For Capital Expenditures	1,362.20
For U. S. Bonds	16,560.00
	200,207.28
Cash Balance At December 31, 1954	\$ 2,649.80

We made a careful analysis of the cash transactions and, where practicable, traced the receipts to their original source. Disbursements for expenses were supported by cancelled checks and invoices issued in the regular course of business. Our examination did not disclose any irregularities in the cash and we believe the funds have been carefully and honestly handled and all accounted for.

General Comments:

A surety bond covering faithful performance of the Secretary-Treasurer, Dr. Millard D. Hill, in the

amount of \$50,000.00, is in force, held by the Medical Society and was examined by us also in force and examined by us were a Primary Commercial Blanket Honesty Bond in the amount of \$25,000.00; a fire insurance policy covering fire loss on office equipment, books and records in the office of the Executive Secretary, Raleigh, North Carolina, in the amount of \$2,500.00; an Automobile Schedule Liability Policy; and a Standard Workmen's Compensation and Employer's Liability Policy.

We found the records maintained to be in excellent condition; we were extended every courtesy and cooperation during the course of the audit; and we experienced no trouble in making our audit and obtaining the necessary information for this report.

WE HEREBY CERTIFY that, we have audited the books and records of the Medical Society of the State of North Carolina, Incorporated, for the period from January 1, 1954 to December 31, 1954, and in our opinion the within statements show the correct financial condition of the Society at the close of the year, together with the operating result for the twelve months ended at that time, according to information and explanations given us and as shown by the books, subject to the within qualifications.

Respectfully submitted,
A. T. ALLEN & COMPANY,
Certified Public Accountants
By: A. T. Allen,
Certified Public Accountant

Raleigh, N. C.
January 18, 1955

Medical Society of the State of North Carolina, Inc.
Raleigh, North Carolina

INDEX

Exhibits

Balance Sheet	Exhibit "A"
Analysis of Net Worth	Exhibit "B"
Statement of Income and Expenses	Exhibit "C"
Cash Receipts and Disbursement	Exhibit "D"

Schedules

Reconciliation of Bank Account	Schedule—1
Investment In United States Bonds	Schedule—2
Schedule of Capital Assets	Schedule—3

EXHIBIT "A"—BALANCE SHEET December 31, 1954

ASSETS

CURRENT OPERATING FUND:	
Petty Cash	\$ 50.00
First-Citizens Bank & Trust Company (Schedule-1)	2,649.80
Accounts Receivable	170.73
Due from American Medical Association Investment in U. S. Savings and De- fense Bonds—At Cost—(Schedule-2)	90,808.00
TOTAL CURRENT OPERATING FUND	\$ 93,703.53
CAPITAL OR NON-OPERATING FUND:	
Office Furniture, Fixtures and Equip- ment—(Schedule-3)	12,436.92
TOTAL ASSETS	\$106,140.45

LIABILITIES, RESERVES AND NET WORTH:

LIABILITIES:

Refunds Payable	\$ 6.50
Due Hospital Savings Association	80.70
Accrued Federal Withholding Tax	446.20
Accrued Federal Social Security Tax	75.62
Accounts Payable	10.00
TOTAL LIABILITIES	\$ 619.02

DEFERRED CREDITS:

Advance Payments on Technical Ex- hibit Space at 1955 Convention	\$ 2,000.00
Advance Advertisement Payments	10.00
TOTAL DEFERRED CREDITS	2,010.00

RESERVES:

Reserve for Mental Hygiene Committee	\$ 2,866.22
Reserve for Taylor Scholarship Fund	600.00
TOTAL RESERVES	3,466.22
NET WORTH:	
Current Operating Fund— (Exhibit "B")	87,608.29
Capital Fund—(Exhibit "B")	12,436.92
TOTAL LIABILITIES, RESERVES AND NET WORTH	\$106,140.45

EXHIBIT "B"

ANALYSIS OF NET WORTH

12 Months Ended December 31, 1954

CURRENT OPERATING FUND:

Balance January 1, 1954	\$80,228.77
ADD: Net Income from Operations— Exhibit "C"	9,113.14
Total	\$89,342.21
DEDUCT: Expenditures Made for Capital Fund	\$1,362.20
Allocation to Reserve for Mental Hygiene	371.52 1,733.92

TOTAL CURRENT OPERATING FUND

12-31-54—TO EXHIBIT "A"

CAPITAL FUND:

Balance January 1, 1954	\$11,074.72
ADD: Purchases Made During Year Through Current Fund	1,362.20

TOTAL CAPITAL FUND 12-31-54—
TO EXHIBIT "A"

TOTAL NET WORTH DECEMBER 31, 1954

EXHIBIT "C"

STATEMENT OF INCOME AND EXPENSES

12 Months Ended December 31, 1954

	Budget	Actual	Difference
Membership Dues—Current and Prior Years	\$ 84,000.00	\$ 92,172.00	\$ 8,172.00
Interest on Gov't Bonds	287.50	3,798.50	3,511.00
Sale of Exhibitors Space	8,000.00	10,894.00	2,894.00
Journal Advertisement— Local	(20,000.00	3,867.36	1,013.36
Journal Advertisement— National .....	(	18,076.00	
Journal Subscriptions	(300.00	266.03	281.76
Sale of Rosters .....	(	315.73	
Authors' Contribution to Cost of Cuts	300.00	178.17	121.83
Commission (1%) from A.M.A. for Collection of Dues	533.50	594.51	61.01
Unexpected Revenue	250.00	0 -	250.00
TOTAL INCOME	\$113,671.00	\$130,162.30	\$16,491.30

EXPENSES:

Executive Budget:

A-1 Expense—President	\$ 1,500.00	\$ 905.14	\$ 594.56
A-2 Salary—Sec.-Treas	2,400.00	2,610.00	210.00
A-3 Travel—Sec.-Treas	1,200.00	1,269.92	69.92
A-4 Salary—Exec. Sec.	9,000.00	9,000.00	0 -
A-5 Travel—Exec. Sec.	3,100.00	3,169.88	69.88
A-6—Clerical Assistants— Executive Office	7,500.00	7,203.94	206.06
A-7 Equipment— Executive Office	1,190.00	1,209.10	19.10
A-8 Office Expense Executive Office	5,500.00	5,940.12	440.12
A-9 Bonding	0 -	0 -	
A-10 Audit	250.00	289.00	39.00
A-11 Taxes—Pay Roll	225.00	269.03	44.03
A-12 Insurance	100.00	82.74	17.26
A-13 Membership Record System Expense	100.00	0 -	100.00
A-14 Publications, Reports and Executive Aids	150.00	143.03	6.97
Total Executive Budget	\$ 32,215.00	\$ 32,122.22	\$ 92.78

Journal Budget:

B-1 Publication of Journal	\$ 19,500.00	\$ 26,103.76	\$ 6,603.76
B-2 Cuts for Journal	500.00	445.38	54.62
B-3 Salary—Editor	2,100.00	2,310.00	210.00
B-4 Salary—Assistant Editor	2,400.00	2,610.00	210.00
B-5 Office Expense— Editorial Office	400.00	110.05	10.05
B-6 Office Expense—Busi- ness Manager's Office	300.00	156.86	143.14

B-7—Equipment—Business Manager's Office	200.00	— 0 —	200.00
B-8—Travel for Journal	200.00	— 0 —	200.00
B-9 Taxes—Pay Roll	90.00	99.00	9.00
B-10 Refunds from Subscriptions, etc.	30.00	— 0 —	30.00
B-11 Publication of Rosters	1,500.00	197.70	1,302.30
Total Journal Budget	\$ 27,220.00	\$ 32,362.75	\$ 5,142.75

Intra-Functional Activity Budget:

C-1 Expense of Executive Council: Travel of Councilors	\$ 2,750.00	\$ 1,163.68	\$ 1,586.32
C-2 Expense—Councilors	1,000.00	80.76	919.24
C-3 Expense—Legislative Committee	800.00	414.84	385.16
C-4 Expense—Public Relations Committee	350.00	— 0 —	350.00
C-5 Expenses—Maternal Welfare Committee	2,000.00	2,000.00	— 0 —
C-6 Expense—Rural Health Committee	200.00	209.78	9.78
C-7 Expense—Cancer Committee	300.00	314.25	44.25
C-8 Expense—Convention Arrangements Committee	800.00	41.03	258.97
C-9 Expense—Scientific Exhibit Committee and Audio-Visual Program	200.00	39.80	160.20
C-10 Expense—Committee on Mental Hygiene	500.00	128.28	371.72
C-11 Expense—Committee on Coroner System	250.00	— 0 —	250.00
C-12 Expense—Grievances Committee	800.00	287.64	512.36
C-13 Expense—Committees in General	1,200.00	1,358.42	158.42
C-14 Expense—Committee on Anesthesia Mortality	400.00	400.00	— 0 —

Total Intra-Functional Activity Budget \$ 11,050.00 \$ 6,468.18 \$ 4,581.52

Extra-Functional Activity Budget:

D-1 Expense of A.M.A. Delegates	\$ 1,809.00	\$ 2,034.57	\$ 225.57
D-2 Conferences Dues	350.00	40.00	310.00
D-3 Woman's Auxiliary	500.00	501.27	1.27
D-4 Expense of Delegates to A.M.A. Regional Conferences	400.00	— 0 —	400.00
Total Extra-Functional Activity Budget	\$ 3,059.00	\$ 2,575.84	\$ 483.16

Public Relations Program:

E-1 Salary—Secretary for Public Relations	\$ 6,600.00	\$ 6,600.00	\$ — 0 —
E-2 Travel—Secretary of Public Relations	2,100.00	1,346.02	753.98
E-3 Travel—Committee Chairman	300.00	— 0 —	300.00
E-4 Clerical Assistants	2,500.00	2,640.00	140.00
E-5 Equipment	1,000.00	153.10	846.90
E-6 Office Expense	2,500.00	3,412.67	912.67
E-7 Taxes—Pay Roll	218.00	256.12	38.12
E-8 Publication and Executive Aids	200.00	242.02	42.02
E-9 Radio - Motion Picture Production, Distribution and Printing	900.00	498.21	401.79
E-10 Production and Distribution of Educational Periodicals and Press Material	1,500.00	651.50	848.50
E-11 News and Press Releases	2,000.00	1,798.70	201.30
E-12 Public and Personified Activities	800.00	1,252.11	452.11
E-13 High School Essay Contest	800.00	801.23	1.23
E-14 Collateral Public Relations with other Committee Activity	800.00	9.59	790.41
E-15 Salary—Health Education Consultant	5,500.00	5,490.00	10.00
E-16 Travel—Health Education Consultant	1,800.00	1,016.25	783.75
E-17 Clerical Help	1,200.00	1,086.00	114.00
E-18 Rural Health Conference	300.00	244.96	55.04
E-19 General Expenses—Rural Health	700.00	600.73	99.27
Total Public Relations Program	\$ 31,718.00	\$ 28,099.21	\$ 3,618.79

Annual Sessions (100th) Budget:

F-1 Programs	950.00	1,630.72	680.72
F-2 Hotel Convention Expenses	1,700.00	1,659.66	40.34
F-3 Publicity Promotion and Reporting	250.00	269.27	19.27
F-4 Entertainment	300.00	401.40	101.40
F-5 Orchestra and Floor Entertainment	2,500.00	2,050.00	450.00
F-6 Guest Speaker and Honorarium	400.00	191.67	208.33
F-7 Banquet Speaker	200.00	159.97	40.03
F-8 Electric Amplification	200.00	120.00	80.00
F-9 Booth Installation and Supplies	3,000.00	4,184.46	1,184.46
F-10 Projection Expense	400.00	480.62	80.62
F-11 Badges	400.00	— 0 —	400.00
F-12 Transaction Reporting Service	2,000.00	2,019.35	19.35
F-13 Rentals for Sections and Exhibits	400.00	2,515.39	2,115.39
Total Annual Sessions (100th) Budget	\$ 12,700.00	\$ 15,682.51	2,982.51

Miscellaneous Budget:

G-1 Previous Accounts Payable	\$ 100.00	— 0 —	\$ 100.00
G-2 Refunds	250.00	— 0 —	250.00
G-3 Retainer and Fee for Legal Counsel	1,500.00	3,328.66	1,828.66
G-4 Reporting (Executive Committee, etc.)	1,300.00	614.26	685.74
G-5 President's Jewel	50.00	42.92	7.08
G-6 Token, Plaque, certificates and Mats—General Practitioner of Year	50.00	67.70	17.70
G-7 Expense—Sections	125.00	193.97	68.97
G-8 Contingency and Emergency	1,000.00	852.54	147.46

Total Miscellaneous Budget \$ 4,375.00 \$ 5,100.05 \$ 725.05

TOTAL EXPENSES \$122,337.00 \$122,411.06 \$ 74.06

SUMMARY

TOTAL INCOME \$130,162.30

LESS: EXPENSES:

Executive Budget	\$32,122.22
Journal Budget	32,362.75
Intra-Functional Activity Budget	6,468.48
Extra-Functional Activity Budget	2,575.84
Public Relations Program Budget	28,099.21
Annual Sessions (100th) Convention Budget	15,682.51
Miscellaneous Budget	5,100.05
	122,411.06

EXCESS OF INCOME OVER EXPENSES \$ 7,751.24

ADD: Capital Expenditures from Current Fund 1,362.20

NET INCOME FROM OPERATIONS \$ 9,113.44

TO EXHIBIT "B" \$ 9,113.44

EXHIBIT "D"

CASH RECEIPTS AND DISBURSEMENTS

12 Months Ended December 31, 1954

RECEIPTS

CASH RECEIPTS FROM REGULAR OPERATIONS:

Membership Dues—	
Current and Prior Years	\$92,272.00
Medical Journal Advertising—Local	4,217.49
Medical Journal Advertising—National	18,076.00
Reimbursed Costs of Engraving Plates	178.17
Sale of Exhibition Space at 1954 State Convention	7,556.50
Sale of Exhibition Space at 1955 State Convention—Escrow	2,000.00
Medical Journal Subscriptions and Sales	266.03
Sale of Rosters	315.73
Interest on U. S. Gov't. Bonds	3,798.50
Over Collection of Dues, Later Refunded	773.90
Commission (1%) from A.M.A. for Collecting Dues	594.51
Miscellaneous Refunds—A-8 (Office Expense)	45.09
Miscellaneous Refunds—C-3 (Legislative Committee)	86.62
Miscellaneous Refunds—D-3 (Woman's Auxiliary)	64.01
Miscellaneous Refunds—E-6 (Public Relations Office)	2.58
Miscellaneous Refunds—E-16 (Travel—Health Education Consultant)	.45

Miscellaneous Refunds E-19 (Expense of Rural Health Conference) -----	5.89	
Miscellaneous Refunds E-11 (Public Relations Press Releases) -----	00.00	
Miscellaneous Refunds F-1 (Annual Session Programs) -----	23.00	
Miscellaneous Refunds F-2 (Annual Sessions Hotel Conventions) -----	18.08	
Miscellaneous Refunds F-9 (Exhibit Expenses) -----	90.00	
TOTAL CASH RECEIVED FROM REGULAR OPERATIONS -----	\$130,174.55	
AMERICAN MEDICAL ASSOCIATION REGULAR DUES COLLECTED -----	58,590.00	
AMERICAN MEDICAL ASSOCIATION DUES IN ESCROW -----	290.50	
NORTH CAROLINA STATE MEDICAL ASSOCIATION DUES IN ESCROW -----	60.00	
RECEIPTS FROM U. S. SAVINGS BONDS MATURED -----	10,004.00	
TOTAL RECEIPTS -----	\$199,188.05	
CASH BALANCE JANUARY 1, 1954 -----	3,360.03	
TOTAL TO BE ACCOUNTED FOR -----	\$202,857.08	

DISBURSEMENTS:		
DISBURSEMENTS FOR CURRENT OPERATIONS:		
Expenditures—Executive Budget -----	\$32,179.11	
Less: Capital Expenditures—		
Office Equipment -----	1,209.10	\$ 30,970.01
Expenditures—Journal Budget -----	32,351.50	
Expenditures—Intra-Functional Activity Budget -----	6,545.10	
Expenditures—Extra-Functional Activity Budget -----	2,689.85	
Expenditures—Public Relations Program Budget -----	\$27,823.23	
Less: Capital Expenditures—		
Office Equipment -----	133.10	27,672.13
Expenditures—Annual Sessions (100th) Convention Budget -----	15,649.59	
Expenditures—Miscellaneous Budget -----	4,093.55	
Refunds of Dues Overcollected and Not Accepted -----	985.73	
Refunds of Dues Previously Accepted -----	1,526.50	
Accrued Pay Roll Taxes at 12-31-53 -----	471.09	
Accrued Hospitalization Insurance at 12-31-53 -----	37.20	
Refund of State Society Dues -----	80.00	
Payment of Refunded Freight Charge -----	2.06	
Refund of Technical Exhibit Receipt -----	140.00	
Refund of State Society Dues Previously Accepted -----	40.00	
Check Refund -----	65.00	
Total -----		\$124,172.31
LESS: Deductions from Wages -----		
Unpaid at 12-31-54: -----		
Pay Roll Taxes -----	\$ 481.03	
Hospitalization Insurance -----	80.70	564.73

TOTAL DISBURSEMENTS FOR CURRENT OPERATIONS -----	\$123,607.58	
Payment to American Medical Association—Regular Dues Collected -----	58,677.50	
Expenditures for Capital Assets -----	1,362.20	
Purchase of U. S. Government Bonds -----	16,560.00	
TOTAL DISBURSEMENTS -----	\$200,207.28	
CASH BALANCE DECEMBER 31, 1954 -----		
First-Citizens Bank & Trust Co., Raleigh, N. C. -----	2,649.80	
TOTAL ACCOUNTED FOR -----	\$202,857.08	

SCHEDULE—1		
RECONCILIATION OF BANK ACCOUNT		
December 31, 1954		
FIRST-CITIZENS BANK AND TRUST COMPANY, RALEIGH, N. C.:		
Balance Per Bank Statement -----	\$5,948.71	
LESS: Outstanding checks: -----		
Number 1146 -----	\$ 3.00	
2304 -----	40.00	
2733 -----	5.00	
8664 -----	25.00	
3956 -----	25.00	
4121 -----	75.00	
4169 -----	25.00	
4177 -----	185.60	
4181 -----	25.00	
4197 -----	19.80	
4202 -----	25.00	
4203 -----	17.12	
4204 -----	209.78	
4206 -----	8.95	
4209 -----	\$2,609.66	\$3,298.91

BALANCE PER BOOKS TO EXHIBIT "A" ----- \$2,619.80

SCHEDULE 2
INVESTMENT IN UNITED STATES BONDS
December 31, 1954
DEFENSE BONDS—SERIES "F":

No.	Issue	Date of Maturity	Date of Maturity at Maturity	Par Value	Cost
No. X356002F	4- 1-50	4- 1-62	\$ 10,000.00	\$7,400.00	
X356003F	4- 1-50	4- 1-62	10,000.00	7,400.00	
X356004F	4- 1-50	4- 1-62	10,000.00	7,400.00	
M1644801F	4- 1-50	4- 1-62	1,000.00	740.00	
M1644802F	4- 1-50	4- 1-62	1,000.00	740.00	
M1644803F	4- 1-50	4- 1-62	1,000.00	740.00	
M1644804F	4- 1-50	4- 1-62	1,000.00	740.00	
X356930F	4- 1-51	4- 1-63	10,000.00	7,400.00	
X356929F	4- 1-51	4- 1-63	10,000.00	7,400.00	
X472186F	3-31-52	3-31-64	10,000.00	7,400.00	
V307206F	3-31-52	3-31-64	5,000.00	3,700.00	
M1804761F	3-31-52	3-31-64	1,000.00	740.00	
C1855637F	3-31-52	3-31-64	100.00	74.00	
C1855636F	3-31-52	3-31-64	100.00	74.00	

SAVINGS BONDS—SERIES "G":

M1186465G	12- 1-42	12- 1-54	1,000.00	1,000.00
M1186466G	12- 1-42	12- 1-54	1,000.00	1,000.00
M1376541G	4- 1-43	4- 1-55	1,000.00	1,000.00
M1376545G	4- 1-43	4- 1-55	1,000.00	1,000.00
M1376546G	4- 1-43	4- 1-55	1,000.00	1,000.00
D616518G	4- 1-43	4- 1-55	500.00	500.00
M1905733G	9- 1-43	9- 1-55	1,000.00	1,000.00
M2355967G	2- 1-44	2- 1-56	1,000.00	1,000.00
M2700601G	1- 1-44	4- 1-56	1,000.00	1,000.00
M2700600G	4- 1-44	4- 1-56	1,000.00	1,000.00
M2772895G	6- 1-44	6- 1-56	1,000.00	1,000.00
M2772896G	6- 1-44	6- 1-56	1,000.00	1,000.00

SAVINGS BONDS—SERIES "J":

V12902J	3-26-53	3-26-65	5,000.00	3,600.00
X734J	3-26-53	3-26-65	10,000.00	7,200.00
X11545J	2-26-54	2-26-66	10,000.00	7,200.00
X11546J	2-26-54	2-26-66	10,000.00	7,200.00
M35509J	2-26-54	2-26-66	1,000.00	720.00
M35510J	2-26-54	2-26-66	1,000.00	720.00
M35511J	2-26-54	2-26-66	1,000.00	720.00

TOTAL PAR VALUE

AT MATURITY ----- \$110,700.00

TOTAL COST VALUE AT DATE

OF ACQUISITION—TO EXHIBIT "A" ----- \$90,808.00

SCHEDULE—3
SCHEDULE OF CAPITAL ASSETS
December 31, 1954

EXECUTIVE OFFICE:

Wooden File Case—Letter Size -----	\$ 21.66
Typewriter Desk -----	25.00
Steel Office Safe -----	150.00
Checkwriter—Paymaster -----	40.00
Steel File Case—Letter Size -----	20.00
Four Steel Card Files -----	20.00
Office Chair -----	35.20
One Desk -----	62.55
Steel Filing Cabinet -----	24.50
Office Desk -----	47.95
Letter File—Two Drawer -----	29.16
Steel Filing Cabinet -----	71.75
Office Chairs -----	40.00
Office Desk -----	87.29
Office Equipment—Miscellaneous -----	1,149.39
One (1) Telephone Table -----	15.45
Two Pairs 12" x 38" C. S. Vents and Brackets -----	8.77
One (1) 20" Vertical Paper Cutter -----	7.56
One (1) Welch Fan -----	40.80
One (1) Emerson Fan -----	24.67
One (1) Desk Lamp -----	10.20
Two (2) Master Model Audiographs and Attachments -----	725.67
One (1) Map of Greater Carolinas -----	37.50
Two (2) Double Files 3' x 5' -----	11.86
One (1) Remington Electric DeLuxe Typewriter -----	337.90
Three (3) Pendaflex Frames -----	5.57
Two (2) Grey Steel Cabinets -----	103.00
Three (3) Transfer Files -----	11.89
One (1) Spec. D. Outfit File -----	7.25
Two (2) Legal Filing Cabinets -----	19.90
One (1) Filing Shelf -----	2.50
Plywood Carrying Case for Audograph -----	17.00
Map Framed -----	3.61
Charter Framed -----	2.57
Cash Box -----	2.79
Steel Desk -----	158.98
Three (3) Desk Trays with Stackers -----	8.57
Waste Basket -----	1.40
Large Chair Mat -----	9.27
Glass Desk Top -----	11.68

Stenograph and Tripod	100.70
Magic Mailer	6.64
Four Drawer Steel Filing Cabinet	78.03
Four Pendaflex Steel Frames	7.42
Remington Electric Typewriter	430.15
Postal Scale	6.50
Numbering Machine	14.88
Filing Stool	11.23
Bookcase	63.86
Remington Rand Electric Adding Machine	215.01
Metal Storage Cabinet	78.28
Metal Filing Cabinet	92.76
Two (2) Cabinet Shelves	10.30
Metal Cash Box	2.32
Pro Rata Share of Cost of Mimeograph Machine	337.47
Typewriter Table	21.00
Metal Correspondence Separator	6.18
Metal File and Sections	68.55
Two (2) Typewriters—Large Type	321.23
Kardex File and Parts	1,812.36
Catalogue Case	20.00
Metal File and Frames	93.07
Electric Typewriter	477.00
Secretarial Foot Control	25.75
Three (3) Transfer Files	16.23
Junior Pendaflex File	22.87
Book Case Section	26.25
Remington Electric Typewriter	290.30
Swivel Chair and Arm Chair	74.48
Audiograph Converter	28.84
Pendaflex File	5.88
Used Desk and (2) Files	281.43
De Jur Camera with Flash Attachment and Case	100.44
Two (2) Welsh Circulars	80.00
Audiograph Machine—Used	300.00
Flight Bag	38.31
Three (3) Box Files	9.42
TOTAL EXECUTIVE OFFICE	\$ 9,016.31
PUBLIC RELATIONS OFFICE:	
Four (4) Aluminum Desk Trays with Supports	\$ 9.00
Steel Costumer	14.20
Postal Scale	4.00
Cash Box	1.50
Supply Cabinet	37.00
Two (2) Waste Baskets	7.00
Metal Executive Desk	112.60
Executive Chair	48.80
Two (2) Side Arm Chairs	60.40
Metal Secretary Desk	136.40
Secretary Chair	30.20
Storage Cabinet	37.00
Two (2) Chair Mats	12.90
Hinge Top Card File	1.60
Stapler	4.95
Pencil Sharpener	1.95
Punch	3.15
Metal Letter File with Lock	61.50
Storage Cabinet	37.00
Royal Typewriter	133.31
Two (2) Electric Fans	63.29
Four Drawer Metal File	69.49
Two Drawer Metal File with Lock and Base	18.36
Supply Cabinet	75.00
Two (2) Desk Trays and Stacks	4.64
Metal Storage Cabinet	51.29
Pro Rata Share of Cost of Mimeograph Machine	508.53
Pendaflex Frames	4.64
Folder Machine and A. B. Dick Stand	397.88
Used Elliott Addressograph	123.83
Two (2) Telephone List Finders	6.06
Pendaflex Frame	4.50
Verifax Printer Type I	247.20
Used Projector	153.43
Model DLS Screen	32.45
Record Player	101.25
Microphone and Stand	19.40
TOTAL PUBLIC RELATIONS OFFICE	\$ 2,641.80
JOURNAL BUSINESS MANAGER'S OFFICE:	
Two (2) Electric Fans	45.00
Steel File and Frames	88.27
TOTAL JOURNAL BUS. MGR.'S. OFFICE	133.27
RURAL HEALTH AND MEDICAL CARE COMMITTEE:	
Masco Tape Recorder	\$ 159.18
One (1) Desk	185.40
One (1) Steel File and Trays	121.29
One (1) Soundscraper	150.00
TOTAL RURAL HEALTH AND MEDICAL CARE COMMITTEE	\$ 615.87
ANNUAL SESSIONS CONVENTION:	
Portable Lectern	29.67
TOTAL CAPITAL ASSETS—TO EXHIBIT "A"	\$12,436.92

The Speaker: I doubt if it is applicable in so far as Dr. Hill's report is concerned, but I would like to direct the attention of the delegates to the fact that a motion to receive a report means that it is received as information, but a motion to adopt means that you not only receive but you approve the policies, principles and recommendations contained therein. There is a distinction. Now, will someone make a motion?

Dr. Joseph F. McGowan [Asheville] I move that the report be received.

[The motion was seconded by several, was put to a vote and was carried.]

The Speaker: We will now hear from our Executive Secretary, Mr. James T. Barnes.

REPORT OF THE EXECUTIVE SECRETARY MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA

Mr. Speaker, President Owens, Members of the House of Delegates, distinguished guests and friends.

A year ago I spoke with some levity, and maybe seriously, about the divers rules to reach a position in the coronary club. Surely in serious vein, I suggested that there were those among you, the members, who should heed advice with me not to strive too hard for that position. At least two executives within the several states have fallen prey in the interim. That is significant, for just two years ago it was two others. Maybe most of us take ourselves too seriously when the job could be equally done in even tone. Let's try.

This report culminates a year of activity for you. In many respects it has been an interesting year. At least our humility yields a respect and experience which over nine years has developed a marked amount of "know-how". We have honestly tried to apply it. We think it shows signs of accomplishment in the far flung activities of your councils, committees, conferences and in the official accomplishments of your several officers where we have found the opportunity for teamwork through the year. Our sojourns have ranged through all those enumerated and, even into national levels where we have found some opportunity to serve humbly. For these opportunities to work with and serve along side you men of medicine I here express thanks. For the Higher Graces which have sustained me during the course of these many efforts, I too, am markedly thankful. We have much cause for pride in the rate of accomplishment which we sense have been gained in your favor throughout the Society's activities over the past year. There are many mileposts of achievement and certainly some guideposts for future travel.

To your President for his guidance and his ultimate understanding at all times we are grateful. He has been a source of sure support as we have moved along the path of directions in our efforts. At no time has he been lacking in decisions which are always a boon to one in administrative work. His manifest understanding and directness has obtained from the day he took office and can be observed in the address he has just delivered to you. He's been your friend and knight through time and years. He's our friend too!

This has been a biennial legislative year. The General Assembly is still in session back in Raleigh. In some respects it has been an enigma and in others, neophytic. Apparently, no great departures have been involved in its actions. It has been troubled by growth factors which characterizes everything about this state, even the extreme youth in its population, social progresses, and it's gangling industrial and agricultural situations. These generate problems for every one, none-the-less for medicine. This

means inevitably that your profession will be caught in the drift of legislative action and your organization should stand ready with profound advice. It must be unselfish. It must have qualities of leadership, in respect to future needs of the state in your area of interest and service. Perhaps in all areas. We have endeavored to fit into that picture of you and the profession. There's much evidence of respect for your considered opinions and there is a legislative desire for your affluence in arriving at decisions which will serve a good public policy and lend protection to the individual citizen and the public health. Never, you, relinquish this respected position by seeking selfish gain and compromising the high principles which mark you as a group and as men. To me these qualities have been nicely exemplified by the several dutiful physicians and dentists who have sacrificed busy careers and personal duty to go to this General Assembly and serve first the public and then the public health in its broadest concept. Of the more than 1,600 bills introduced, we have studied a synopsis on each. Divers degrees of consideration and/or action has been required in more than thirty bills, which were viewed with thought, counsel and discussion. We have endeavored to counsel always with your friend and advisor, Mr. John Anderson. His affluence in favor of good public policy and the rightfulness of public causes stands as something to be admired not just by us, but by honest public servants in all quarters. Judgement and discretion empower his decisions and his advice and they make their mark in most situations. For his understanding we thank him. Time will weigh the end results of the present legislative course. Surely we cannot be too tangible in evaluating accomplishments for the public interest and public policy, attained at this time, though several salutary laws have been concluded. We shall study all measures to the end and stand ready to help you raise standards for good medical care and health service and facilities so long as there is the opportunity.

Your headquarters staff has my admiration. It is praiseworthy. Each member has shown growth and effect in duty for the year. Production has proven as much. I am sure they would have me express individual and personal support of your programs and an appreciation of your accomplishments. They are worthy of your confidence and of your moral support.

President Owens and Secretary Hill will have reported upon us to you ere this report is done. Whatever their evaluations, we shall strive to live up to them and regardless of decisions reached in the House of Delegates today, we shall carry on the course of progress which we know you will take. We hope this Session will find some "marks of painstaking" for your enjoyment and we feel confident as we face new years of service with and for you.

The following table will offer some statistical accounting of our activities for the year:

A. Incoming items of processible mail.....	17,364
B. Letters, personal and general, dispatched	27,290
C. Public relations Bulletins dispatched	36,000
D. Total mail items prepared and dispatched	63,290
E. Telephoned communications, local, prepaid and toll	1,493
F. Telegrams received and dispatched.....	391
G. Reports, formal, miscellaneous, agenda, transmittals and memoranda	632
H. Review of literature and reports.....	706
I. Personal conferences	685

J. Meetings attended	136
K. Public speeches	16
L. Releases to Press	4
M. Releases to Radio	3

There was a gain of membership over 1953 of 170. The total at December 1, 1954 stood at 2909. It reached 2915. The mark was the highest in the history of the society. For the year 1955 the prospects are equally good; as of April 30, 1955 there were 2749 members in good standing for the year 1955 as against 2628 on the same date a year ago, a gain of 121. Somehow, we expect to gain sufficiently to reach the 3,000 goal for 1955.

We made every endeavor to balance an unbalanced budget authorized in 1954. We can report that there was a modest reserve added to the standing reserves during the year. Such marks our efforts.

May we remark that the committee work of the Society is the life-blood of the organization. Surely, we have a keen interest in the activity, accomplishments and reports of all committees. We pledge increased attention to these in the coming year. We respectively cite the importance of member support and activity in these committee activities which is as important as the resources of staff and finance. Let us all team to do an ever more effective job through the committees.

The accrued placement of physicians through our placement service has now bettered 400 and we are finding an unusual utilization both on the part of our member doctors and the rural and urban communities of the state. We hope to be allowed to keep this service on its present basis of not emphasizing the rural as against the urban and industrial needs of the people of the state. We believe that to be sound and that our combined efforts in the staff at headquarters will further enhance this feature of operations. Dr. Hubbard and, perhaps Mrs. Boutwell, will have made comments on this in their Rural Health Reports.

Mr. William Hilliard will report upon Public Relations since his assignments from the staff and the committee are considerably in that field. There have been good goals during the year and certainly good gains. We shall work at it more diligently another year trying to reach down to county and member level for more real public-relations-doings in the future.

The North Carolina Medical Journal stands out as a medium of excellent editorial writings, essays, format and sound technical advertising of sound products. We can report gains in revenue and also gains in production costs. That twain always meets, but the balance does have a constancy. As Business Manager, I have the duty to report for fiscal 1954:

Journal Budget:

Publication	\$21,000.00
Cuts	500.00
Salaries, editorial	4,500.00
Office expense, editorial	400.00
Office expense, managerial	300.00
Equipment, managerial	200.00
Travel expense Journal Business-local and national	200.00
Taxes	90.00
Refunds	30.00
Total Journal Budget	\$27,220.00

Receipts:

Medical Journal Advertising	\$22,293.49
Subscriptions and sales	266.03
Sale of Rosters	315.73
Reimbursed cost of cuts	178.17
Appropriated by the Society	9,309.33
Total Receipts	\$32,362.75

Actual Disbursements:

Publication	\$26,301.46
Cuts	445.38
Editorial salaries	4,950.00
Office Expense, editorial	410.05
Office expense, Business Manager	156.86
Equipment, Business Manager	
Taxes (Social Security)	99.00
Travel—for Journal	
Refunds	

Total Actual Disbursements\$32,362.75

Expenditures:

In excess of budget	\$ 5,142.75
Receipts above expenditures	Nil

We here remark that this is the ninth Annual Sessions to which we have made a report. This week we shall undertake to close a decade of good records. Your Council had the graciousness to assure that yesterday in a three year tenure of the privilege to hold this good office. As one undertakes this closing year of a decade and a new so-journey, one is imbued with a thanksgiving to God for the good strengths and the good mind which permits one to carry on. I shall strive to do that which graces God in the coming year, and to live a little bit lighter of the weights which engrave the soul of man. With it I shall be dutiful to my tasks and assignments, but more mindful of those limitations which will increase with my year. May it be a blessed year for all of us. [Applause]

The Speaker: Will you receive this excellent report of our Executive Secretary, whose services we prize so highly?

[Upon motion regularly made, seconded and carried, it was voted to receive this report.]

The Speaker: We will now have the report of Mr. William N. Hilliard, the Executive Assistant to Mr. Barnes.

Mr. Hilliard: Mr. Speaker, President Owens, Members of the House of Delegates, Honored Guests: Over the past year your Executive Assistant has tried to exert his efforts in that area of public relations which would be most beneficial to the Medical Society of the State of North Carolina as a whole.

We have tried to base our efforts on the public relations objectives and projects as outlined by your Committee on Public Relations, of which Dr. Donald B. Koonce is Chairman, with Dr. John Rhodes and Dr. Amos N. Johnson as members. I wish to express my appreciation to these three men for their generosity in time and effort in guiding the activities of your Public Relations Assistant. Credit should also go to your Executive Secretary, Mr. James T. Barnes, who has been instrumental in keeping us on the right track on many occasions. His membership on the Public Relations Advisory Committee of the American Medical Association has proved to be of tremendous help in keeping up with national trends in medical public relations.

Since the first of the year, we have been engaged in the distribution on a personal contact basis, of a County Public Relations Manual, a guide book of suggested Public Relations programs for local societies, prepared by the American Medical Association. Many of the larger County Medical Societies already have these manuals, and the remaining societies will be contacted as rapidly as time permits. These manuals have been delivered on the occasion of a meeting with the Public Relations Committee of each County Society, with this occasion serving as an opportunity to discuss the designation of official spokesmen for the coun-

ty society on matters of public information and the suggestion of an informal meeting for the society with local press representatives.

Your Public Relations Committee in cooperation with the North Carolina Press Association sponsored a Medical-Press panel discussion conference in Raleigh on Tuesday, November 23, 1954, on the topic "Mutual Responsibilities in the Public Interest," moderated by Mr. Gordon Gray, President of the University of North Carolina. Panel members consisted of four outstanding members of the medical profession and four leading members of the communication media representing press, radio and television.

Out of this discussion came two specific suggestions, mutually agreed upon by the press and medical representatives taking part in the discussion. First, that it would be of great value if each county medical society would designate official spokesmen authorized to represent the county society in matters of public information. Second, it was suggested that an informal get-together of Medical and Press representatives at the local level for an informal discussion of mutual problems of news sources and press information would serve as a stepping-stone to mutual understanding, with the hope that an outgrowth of these two suggestions would be a local code of cooperation, mutually agreed upon by representatives of the press and the medical profession.

Also at the Medical-Press Panel Discussion Conference, Dean Norval N. Luxon, of the School of Journalism of the University of North Carolina, suggested a possible study of "Relationships between the press and the Medical Profession in North Carolina." This proposal has since received the approval of the Executive Council, and on February 23, 1955, the Public Relations Committee along with Mr. Barnes and myself, met with Dean Luxon and Professor Carter of the University staff to discuss implementing such a study. Details of the study are being worked out through an advisory committee of physicians working in cooperation with the Committee on Public Relations and Dean Luxon.

The Eighth Annual Public Relations Conference of the Medical Society was sponsored by the Public Relations Committee on Wednesday, February 23, 1955 in Raleigh. Approximately 80 persons attended, most of them physicians. Proceedings of the conference will be mailed out in the near future to all who registered at the conference and to County Society Secretaries and members of the County Committees on Public Relations.

Some 233 complimentary one year renewal subscriptions to the magazine "Today's Health" were sent to the Governor of North Carolina, the Council of State, Supreme and Superior Court Judges, members of the North Carolina General Assembly and to national members of Congress from North Carolina. Some 107 complimentary one-year subscriptions to this same magazine were sent, in conjunction with the Committee on Rural Health, to the County 4-H King and Queen of Health in each County so designating a King and Queen of Health from their 4-H Club.

The Eighth Annual High School Essay Contest was sponsored and conducted by the Public Relations Committee in cooperation with the Association of American Physicians and Surgeons. A \$600 educational scholarship was won by Raymond Randolph of Henderson who will present his winning essay tomorrow. His essay and the next two best essays in the state contest have already been forwarded for consideration in the national contest.

A Medical Society State Fair Exhibit was sponsored again this year by the Public Relations Com-

mittee, featuring an exhibit from the AMA entitled "Health Today." The display pictured three main points:

(1) "Your health is better today," emphasizing statistically the reduction of infant and maternal deaths, the increase in life expectancy, as well as the decrease in the communicable diseases of childhood and also pneumonia and influenza; (2) "less working time to pay for it," a visualization of the fact that one-half the number of working days are required today to pay for the same medical services as in 1939; and (3) "an easier way to pay for it," a question and answer demonstration of voluntary health insurance, emphasizing that over 50 per cent of our population is now covered by some form of voluntary health insurance. Also included in the exhibit were a series of charts on eye care prepared by the University of North Carolina in cooperation with the Committee on Eye Care of the State Medical Society.

The following pieces of literature were distributed at the State Fair Booth: "Your Money's Worth in Health," "Health Today," "Why Wait," "On Guard" and "Quack."

The showing of AMA produced medical television films were arranged over the eight television stations in North Carolina and include the following titles:

"A citizen Participates".

"Operation Herbert".

"A Life to Save".

"Your Doctor".

"What to Do". (Series of 12—5 minute films on what to do until the doctor arrives.) Incidentally, these films are also available for showing to lay groups such as civic clubs, etc., in your local area, obtainable from the Headquarters Office of the State Medical Society.

In September, of last year, arrangements were made for the Headquarters Office to become a distribution point for North Carolina of all AMA transcribed radio programs. These are being used by quite a few radio stations in North Carolina in cooperation with local medical societies. These programs include programs on a variety of topics on everyday health problems.

A series of "Televisuals" are being accumulated by the Headquarters Office for use by County Medical Society groups in developing local television programs.

The Public Relations Bulletin was continued on a monthly basis with articles included concerning district or county medical societies and their meetings, listing places, times and content of meetings whenever information was available in an effort to stimulate interest in these local programs. Activities of other Medical Society Committees were highlighted whenever the information could be obtained.

Winning and sustaining as many friends for medicine as possible is the ultimate aim of public relations programs, and the future of American medicine hinges upon the opinions the public holds about your medical care system and you as medical men. Good public relations depends upon the performance of the entire medical team. Every doctor should practice individual public relations, and in addition these public relations efforts should be integrated and supplemented by more formalized campaigns of your local medical society.

Every society, no matter how small, should have some kind of a public relations program. Thus we venture to suggest these steps; set up, if not already arranged the machinery to conduct a public relations program by determining major local public relations needs; evaluating these needs, select-

ing for public relations action those areas in which public relations needs are greatest; developing a basis public relations program, setting certain goals to reach within a given period of time and delegating responsibilities for devising and putting all phases of the public relations program into operation.

Statistical reference is made to the following tabulation with regard to the public relations mailing, speeches and personal contacts.

Mailing Tabulation

Mail received	2,768
Mail dispatched	10,198
Releases mailed (copies)	3,994
Notices of High School Essay Contest.....	1,600
High School Essay Contest Package	
Libraries	2,200
Notices of Public Relations Conference.....	1,000
Speeches before Civic Clubs	6
County Medical Society Meeting	18
Attended District Medical Society	
Meetings	3
National Conferences attended.....	2
Contacts with individual physicians.....	198
Meetings with County Medical Society,	
Public Relations Committee.....	18
Public Relations Bulletin	36,000
Telephone: Local	2,148
Toll	188
Motion Picture Films Distributed.....	28
Radio Programs distributed	39

[Applause]

The Speaker: What you do with Mr. Hilliard's report? [Upon motion regularly made and seconded, it was voted to accept the report.]

The Speaker: We are pleased and flattered to have here on the platform Mrs. Powell G. Fox, President of the Woman's Auxiliary of the Medical Society of the State of North Carolina. We will hear her report with pleasure.

[The audience arose and applauded.]

Mrs. Fox: Dr. Owens and Members of the Medical Society of the State of North Carolina: I wish to submit the following report:

With the beginning of my tenure of office in May plans were laid for the year's work. The completion of committee chairmen appointments, collecting data and compiling the Yearbook and arranging for the Executive Board Meeting in September took the better part of the summer.

The groundwork for our efforts during the year was laid September 8, 1954, when the Fall Executive Board Meeting was held at Morehead Planetarium, in Chapel Hill. The discomfort and unseasonably hot weather seemed not to deter the spirit of things, it was well attended. We like to believe it was a source of inspiration as well as instruction. Dr. Paul Whitaker spoke on "The Health Picture in North Carolina Today". We had greetings from Mr. James Barnes, Executive Secretary of the North Carolina Medical Society. Dr. George Paschal, First Vice-President of the North Carolina Medical Society was their representative and brought us an encouraging message.

In late September I had the pleasure of appearing before the Executive Council of the Medical Society and giving a short resume of the accomplishments to date and the projects to be undertaken this year.

"Leadership in Community Health" is our National Auxiliary work theme for the year, "Service to Others" is ours. These were reflected in the goals we worked toward; even though not fully attained creditable progress was made. Among these were:

1. Increased Membership
2. Nurse Recruitment
3. Today's Health
4. Public Relations
5. Civil Defense
6. Mental Health
7. American Medical Education Foundation
8. Rural Health

The Membership picture is encouraging in spite of the fact that I must report the loss of two, previously considered organized counties; Greene in the Fourth District, and Randolph in the Eighth District. However I am happy to say, through the re-organization on a county level, we now have two new auxiliaries in the First District. This brings our total of 100% organized districts to two. We now have 50 active county auxiliaries with a total membership of over 1916—and 28 members-at-large to date.

Cooperation in Nurse Recruitment was strengthened markedly. Thirty-eight counties participated. Many auxiliaries made worthwhile contributions to the recruitment campaign in high schools by assisting during "Career Day" giving teas for both white and colored students in their respective high schools and conducting tours of county hospitals. Three Future Nurses Clubs were organized, 8 scholarships or loan funds have been established. In one district over \$500 has been raised for a scholarship. Students have been sponsored in both regular and practical nurse training.

Today's Health was taken as a special project in some auxiliaries, a definite interest in most of the others. Thirty-six counties participated, several won recognition for selling more than 100% of their quota. The total number sold to date is 769.

Public Relations have been enhanced by the co-operation of auxiliary members, both individually and collectively, with agencies serving the community. Many served through their church, P.T.A., Junior League, and American Association of University Women. Each district reports working with health organizations and civic enterprises. One auxiliary chauffeured aged people to "Golden Age" meetings, another worked with the Welcome Wagon distributing pertinent health information to the newcomers in their area.

Continued interest in Civil Defense was quite apparent. Through your State Chairman each County President was put on the State Civil Defense mailing list. Eighteen of the 24 auxiliaries reporting took part, both individually and collectively in various phases of Civil Defense. Six organizations had a program on the subject given by well qualified persons.

The Auxiliary has received recognition in the Civil Defense Bulletin for Women, for its interest and participation.

It is encouraging to record increased interest and activity in mental health. Twenty-six counties reported, 12 had programs on different phases of mental health. Some assisted in plans to help obtain mental health clinics; where clinics were established they assisted in many ways. Radio programs were sponsored, T. V. was used. Community lectures on mental health were promoted.

The Auxiliary was well represented at the State Rural Health Conference last Fall and is taking active interest in the two regional conferences for eastern and western sections in March, more Rural Health Chairmen were appointed this year and they report a variety of activities; acting as hostesses for local Rural Health Meetings, providing skin tests (T.B.) for first grade students in rural areas, furnishing monthly transportation to Orthopedic Clinic, helping doctors gather information for med-

ical forum for rural and urban people.

Thirty-one auxiliaries have donated to the American Medical Education Foundation, ten of those in honor of Doctors Day. Three plan "benefits"; bridge, informal dance, and a Magic Show, all profits to go to the Foundation. Amount of gifts to date is: \$1,061.25.

One hundred and one (101) Bulletins have been sold, one county reports 100% subscribed.

Our local projects, the Sanatoria Beds Endowment Funds, still are short of the hoped for completed three. The Cooper Endowment Fund has not, at this date, attained its goal of \$10,000. We have hopes that it will before the fiscal year closes. The new project, our Yoder Endowment Fund for the establishment of a bed in Gravely Sanatorium is now something more than a gleam in our eye. To date donations total \$502.60. Our guests in the Sanatoria Beds are: Cooper, Miss Margie Lee Renfrow of Kenly who entered January 1955, after Mrs. Crisp had been discharged December 1954. McCain, Dr. Geddie Monroe of Fayetteville. Stevens, Mrs. Lena Ann Cloniger, graduate nurse of Charlotte, who entered January 1955 upon Dr. Crandell's release in December 1954. A year around remembrance schedule was set up by the three chairmen in which most of the organization took part.

Our Student Loan Fund we hope to reactivate by deleting the restriction to sons and daughters of doctors. The necessary change in the By-Laws will be presented to the Executive Board for approval and voted on by the House of Delegates in May.

Our mouthpiece, the Auxiliary News, under the expert editorial thumb of Mrs. George Paschal, Jr., has offered us a wonderful medium for the exchange of news, views and ideas. Each edition was put together with sharp evaluation as to newsworthiness and real "know how". Your President is most grateful for the invaluable opportunity it has offered her to keep informed, as well as to inform. However were it not for the Hospital Saving Association of Chapel Hill who shoulder the larger financial burden as well as the publishing burden of our news sheet, we could have none of the proven benefits of such an enterprise.

May I express to them our grateful appreciation of their untiring service and cooperation. May I remind you, too, that we could have a 100% coverage of the membership if each county would only follow the suggestion of the editor and send one list of dropped members and one list of new members to her. The mailing list then could be kept current.

Traveling was part of my responsibility and a very large part of my pleasure. I was most fortunate to be able to accept all but two of the invitations extended to me, those of the Seventh District. In all, I attended five district meetings, and six county meetings. Burke County Auxiliary invited all the organizations in the Ninth District to their meeting so I had the distinct pleasure of meeting many of the ladies I had the privilege of being with during the Ninth District Meeting in Lexington. If the pleasant association of all these contacts were but half the inspiration and satisfaction to those whom I traveled among, as they were to me, then I consider the time and effort expended well worthwhile. I attended the Rural Health Conference in September and the Public Relations Conference held in February, there was no notification sent to me of the North Carolina Health Council meeting so the Auxiliary was not represented, I have however contributed material to two issues of their Newsletter. The Auxiliary was represented at the Southeastern Conference on Family Living held in Asheville in October by Mrs.

J. D. Stratton and at the various meetings of the North Carolina Women's Council by Mrs. C. T. Wilkinson. We were also represented at the Farm Bureau Women's Public Affairs Conference and Nurses Association meeting in Asheville.

The year is about at an end and my deep appreciation goes to each member for their fine work. Goals were attained and work accomplished by your willing cooperation, enterprise, and determination. You ARE the Auxiliary and we are grateful to you.

Hearing of work being done is encouraging; seeing it and learning to know those whose efforts reflect the purpose of this fine organization and make possible its success, is the happy reward of service which I feel honored to have been able to give. You and I are sculptors, in a sense. Let us continue to create something worthwhile and enjoy the privilege of doing so, day by day, and year by year.

I could not end this report without expressing my sincere appreciation and deep gratitude to the Medical Society and every single person in the Executive office for so markedly lightening my burden.

They have been bombarded by me constantly with this or that problem and never seemed to consider it too trivial to listen to, and to assist in solving. This has all involved time and expense.

May I thank you and them most sincerely.

[Applause.]

The Speaker: May we have a motion that we receive Mrs. Fox's report with expressions of appreciation.

[Upon motion regularly made and seconded it was voted to receive the report of the President of the Auxiliary with expressions of appreciation.]

The Speaker: Through the self-sacrificing and untiring efforts of Dr. Lenox Baker, there has been assembled in the tent on the lawn at the far end of the building some very fine scientific exhibits. This is to invite and to urge all who attend this meeting to go see those exhibits and to make exhibitors feel that their efforts have been worthwhile by showing interest and expressing it to them.

You have honored me again by asking me to serve as your presiding officer on this occasion. Perhaps you will allow me a few moments of philosophical reflection. If we engage in the acrimonious use of words, a chain of events comes into being. The higher brain centers convey the message to the pituitary gland, that says, "look out!" Then the pituitary sends the message to the adrenals, which says, "the old man is on the rampage again; get ready." The adrenals bring up their reserves and pour an excess amount of internal secretion into the blood stream. The heart rate goes up, the blood pressure goes up, the arteries get a little harder, the muscles get a little more tired, and the brain becomes a little more enfeebled. As a result of that, we are in a state of stress, our lives become a little shorter, we have perhaps lost some friends, we have failed to accomplish what we wished to accomplish, and, from my standpoint, what is much more important, we have wasted a lot of time.

We will all agree without hesitation that in this very democratic group opportunities should and will be given to every qualified member to give full and free expression to his thoughts and his ideas concerning the business to be considered. I am sure you will agree with me that it is very desirable that this process go on with as much efficiency as allowed within our capacity. Therefore I earnestly request that you observe a few very simple rules:

(1) Will you address the chair, and will you state in a loud, clear, unmistakable tone your name and the County from which you come. That serves two very important purposes. In the first place, our stenographer must make a record. Unless she hears you, she cannot make the record. Secondly, your fellow delegates need to know who you are and where you are from and what you think.

(2) In the last year or two we have always requested that anybody who was to speak go either to the microphone there or the one on the rostrum, but since we have gathered our group a little more closely in the front, I wonder if it won't be permissible for us to try to eliminate the necessity of getting up and the scrambling over the seats of all your brothers to get to those microphones. If you have any remarks of great length to make, perhaps it would be well to make your way to the microphone, but if that be not true, will you stand up where you are and say who you are and where you are from and make your remarks. If we can't hear, we will have to abandon that.

(3) I ask you please to limit your remarks to the subject under discussion. Before this meeting is over, we will have ample opportunity to discuss every pertinent subject which comes to mind. It is either on the agenda or you will be given the opportunity to bring it up under New and Unfinished Business. So will you please confine your remarks to the subject under discussion.

(4) I beg of you to address your remarks to the group as a whole and to the chair and not to the man in the seat next to you or to some other individual.

Now we come to the more or less routine business, I would like to remind you that the annual reports of the various and sundry divisions and committees are extremely valuable documents. In order to facilitate the business of this House of Delegates, they have been gathered together into a compilation which has been mailed to you in advance and you had the opportunity to read it.

The President, the President-Elect, the Constitutional Secretary, and the Executive Secretary of the State Society met in Raleigh some days ago and went over all these reports to try to glean from them the things which they thought required some action on your part.

In addition to that, the Executive Council has now reviewed all of these reports. The Executive Council has certain recommendation to be made about this report and that one. I ask, may I have your permission to read the name of the Committee—their report will be before you—that I request the Chairman or any other member of the Committee if there is anything to be added to that report, and that I indicate to you if there is any comment which the Executive Council would make or anything to call to your attention? If neither one of those things is true, may we consider that that reported is adopted without putting the formal motion on each one, which is a great-time-consuming process? If you agree that that is proper, may I have a blanket motion covering the adoption of these reports as I have outlined it?

[Upon motion regularly made and seconded, it was so voted.]

The Speaker: Now please understand me; I do not mean even to intimate that you don't have a perfect right to discuss any report or say anything about it. That is done purely and simply as a time-saving maneuver.

I will now go down the list of the reports, sticking to the agenda as it was prepared.

The first item on the agenda is the report of the First District, Dr. T. P. Brinn, Councilor.

REPORT OF COUNCILORS

Report of First Medical District

The officers of the Society are Dr. J. A. Gill, Elizabeth City, President; Dr. William H. Romm, Moyock, Vice-President; and Dr. Thomas M. Horsley, Elizabeth City, Secretary and Treasurer.

We have enjoyed a very successful year with the various component County Societies living in peace with no ethical problems involved. We have actively participated in the six Extension Post Graduate Meetings given by the University of North Carolina Medical School, with Edenton, Ahoskie, and Elizabeth City alternating as hosts for the occasions.

T. P. Brinn, M.D.

First District Councilor

[Adopted]

Report of Second Medical District

During the past year the affairs of the Second District have proceeded in the usual manner. To date there have been no untoward occurrence that required investigation.

The annual meeting of the Second District was held in Williamston on February 9, 1955, with Dr. Walter Ward presiding. The meeting was well attended and, Dr. Walter B. Martin, President of the American Medical Association, delivered the principal address. Present also were Dr. W. C. Davison, Dean of the School of Medicine at Duke University, Dr. C. C. Carpenter, Dean of the School of Medicine at Bowman Gray and Dr. William P. Richardson of the University of North Carolina Medical School representing Dr. Reece Berryhill, Dean of that School.

J. S. Rhodes, Jr., M.D.

Second District Councilor

[Adopted]

Report of Third Medical District

There were no happenings of note in the Third District in the year being reported upon. A regular fall meeting of the Third District was held in Whiteville with good attendance. The Spring meeting, with the election of officers, has not as yet been held.

Donald B. Koonce, M.D.

Third District Councilor

[Adopted]

Report of Fourth Medical District

The past year has been one of continued progress in the Fourth District. Harmony among the members, improvement in medical knowledge and greater service to those who need our attention have been our aim. We have held regular quarterly meetings rotating between Wayne, Wilson, Edgecombe-Nash and Halifax Counties.

Many new physicians have come into the district since my last report. These have become members and are now taking an active interest in all matters which concern organized medicine.

No instance of unethical conduct or discord have come to my attention during the year.

J. Grover Raby, M.D.

Fourth District Councilor

[Adopted]

Report of Fifth Medical District

During the past year several new physicians have located within the Fifth District to enter into private practice. These doctors have been heartily welcomed and have entered fully into activities of the Medical Society.

The Fall Meeting of the Fifth District, held at Sanford, N. C., with Lee County Medical Society as hosts, was well attended and proved to be a thoroughly informative and enjoyable affair. It was decided to have only one District Meeting each year, this to be held in the fall, and concentrate

full efforts on good attendance and participation in this one meeting rather than the two as held in previous years.

Several problems arising within the past year have been investigated and settled on a local level with factual and satisfactory resolution. There has been a spirit of harmony and a desire to do right. A further evolvement of cooperative effort is anticipated for the incoming year.

Joseph S. Hiatt, Jr., M.D.

Fifth District Councilor

[Adopted]

Report of Sixth Medical District

The Councilor has had referred to him by the Committee on Grievances three cases for investigation. These cases were investigated and reported to the Grievance Committee and apparently settled satisfactorily.

There have been no other occurrences in the District to suggest any lack of harmony in the profession or breach of ethics.

A. H. London, Jr., M.D.

Sixth District Councilor

[Adopted]

Report of Seventh Medical District

The Seventh District has had a number of very fine meetings and lectures this year.

1. The Heineman Lectures in Charlotte, N. C.
2. The Nalle Clinic Lectures in Charlotte, N. C.
3. A Heart Lecture in Gastonia, N. C.
4. A meeting sponsored by the Sunrise Dairy in Gastonia, N. C.
5. The District Meeting in Shelby, N. C.
6. A Postgraduate Medical Program of 6 meetings given by the Faculty members of the University of N. C. Medical School in Alhambra, N. C.
7. A Postgraduate Course at Shelby, N. C.
8. The Matherson Clinic Lecture was held in Charlotte, N. C. during the past year.

The Vice Councilor, Dr. Leslie Morris, attended the meeting in Asheville, North Carolina, which was sponsored by the A.M.A. The Councilor has attended all of the Executive Board Meetings. There have been no grievances reported to this office.

John W. Ormand, M.D.

Seventh District Councilor

[Adopted]

Report of Eighth Medical District

The Eighth District Annual Meeting was held at Elkin on October 24th, with an excellent program and very good attendance. Four of our seven county societies cooperated in partially financing our meeting by contributing 25¢ per capita from their treasuries, a newly inaugurated idea to share the usual deficit incurred by the host society. This year we will meet at North Wilkesboro, and are considering a Saturday meeting to afford a pleasant weekend in the mountains at the height of the autumn foliage.

The affairs of the District are in good order, and no major disharmony among the doctors is known to me.

O. Norris Smith, M.D.

Eighth District Councilor

[Adopted]

Report of Ninth Medical District

The affairs of the Ninth Medical District have progressed in a harmonious manner during the year. The annual meeting of the Ninth District was held in Lexington, North Carolina, on September 30 and was well attended. Members of the Davidson County Medical Society arranged a most interesting scientific program presented by members of the faculty of Bowman Gray School of Medicine, Winston-Salem, North Carolina.

The annual meeting for 1955 will be held in Mooresville, North Carolina, and the program will be sponsored by the doctors in the Mooresville area.

The Extension Division of the University of North Carolina sponsored a postgraduate course in the fall of 1954. The course was well attended by doctors in this area.

I wish to express my appreciation for the many considerations that have been shown me by the various county societies within the past year.

John C. Reece, M.D.
Ninth District Councilor
[Adopted]

Report of Tenth Medical District

There is no news of importance to report from my District. We are going along about as usual. We had our Fall District meeting in Asheville, as a Symposium, which was well attended, and a very interesting and instructive program was given.

I am very much elated at the growth and interest in our District meetings.

Our Spring meeting of the District is to be held at Waynesville, North Carolina, on the 20th of April.

W. A. Sams, M.D.
Tenth District Councilor
[Adopted]

The Speaker: The next item is the Report on Candidates for General Practitioner of Year.

Dr. Sams: Mr. Speaker and Officers of the State Society: As the Chairman of your Committee on the General Practitioner of the Year for North Carolina it was my privilege to be endorsed in my own name, sir, by my small County Medical Society as the General Practitioner for the Year of North Carolina. I was also endorsed by two or three other counties in my district and my name was sent in. I knew nothing about this having been done. When I came yesterday, of course, I withdrew from the Committee, and the other members of the Committee went into session, and my name was withdrawn. That is why I am up here.

Mr. Speaker, for a good many years, your Committee has worked diligently on this thing, and I assure you that it is a matter of a lot of study and work and quite an effort.

A year ago I had the honor to stand here and present the name of the man who is today the A.M.A. General Practitioner of the Year for the entire country and we are very proud of our efforts in that direction and of Dr. Karl Pace who was elected to this high position for the nation by the Trustees of A.M.A.

Mr. Speaker, your Committee on General Practitioner of the year has three names as required by our By-Laws, to present.

The first one I desire to present is that of Dr. John Bullard Ray. Dr. Ray was born in 1875, son of James Ray and Annie Morehead Bullard Ray. In 1898 Dr. Ray graduated from Baltimore Medical School, which is now a part of the University of Maryland. Later he took extension courses at the University of North Carolina and the University of Virginia. Dr. Ray is a former mayor of Leaksville, a former member of the Leaksville Township School Board, and a member of the Episcopal Church. He is a Rotarian and during World War I and II served as a member of the draft board in Leaksville. He has served as a member of the Board of Directors of the Leaksville Bank and Trust Co. and Loan Association; and made the first president of the organization and has served in that capacity since.

That is Dr. John Bullard Ray, of Leaksville, Rockingham County, and here is his file.

The next one which the Committee desires to

present to you gentlemen, is Dr. Henry Baker Perry, Sr.

Dr. Perry was born September 1, 1879, one of the first graduates from Watauga Academy. Graduated from North Carolina Medical College (U.N.C.) and passed State Board in 1905. First president of Ashe-Watauga County Medical Society, operated first hospital in Wataugu County and served on town board for six years. Represented Watauga, Ashe, and Alleghany Counties in the State Senate in 1949 legislature. Re-elected to the State Senate in 1955. In 1919 successfully treated severely burned child by grafting skin from self and child. Scars still on doctor's arm where grafts were removed. In 1918 performed first appendectomy in Watauga County. The operation being performed in the home of the patient, a kitchen table was the operating table and kerosene lamps were used for light. The patient is still living.

This is Dr. Perry's file.

The next name to be presented is Dr. George Erick Bell from Wilson, N. C., presented by the Wilson County Medical Society.

Dr. Bell was born in Wakefield, in 1893, son of Dr. George M. and Helen (Richardson) Bell. He graduated from Wakelon High School in 1914. Attended Wake Forest College for two years then Eastman College, Poughkeepsie, New York. After working one year returned to Wake Forest College, graduating in 1919 with degree of Bachelor of Science. Received M.D. degree from Jefferson Medical College in 1921, following which he interned at the State Hospital in Raleigh and at Frankfort Hospital, Philadelphia returning to North Carolina to begin practice of medicine in Wilson. Dr. and Mrs. Bell have three children, Inza Tomlinson, George Erick, Jr., and Joanne. Dr. Bell belongs to the First Baptist Church of Wilson. Has served as President of the Wilson County Medical Society, the Fourth District Medical Society and was First Vice-President of the Medical Society of the State of North Carolina in 1945-47, and also served as chairman of the committee appointed to select the first full-time Executive Secretary of the State Medical Society. Doctor Bell is a member of the Benevolent and Protective Order of Elks, a Mason and a Shriner, serving for the year 1948 as Illustrious Potentate.

Gentlemen, that is the file of Dr. Bell.

These three are the selections of your Committee. You will recall that your set-up of this procedure allows discussion of a very few minutes by representatives of the respective component societies. Since I called Dr. Ray first, I will ask that the Rockingham Medical Society present Dr. Ray.

The next one is Dr. Perry from Watauga County.

Dr. Raymond Harris Harmon [Boone]: I am representing the Ashe-Watauga County Medical Society. We are very proud to present our candidate for the year. We call him "Senior" because he has a son by the same name.

Dr. Perry performed the first appendectomy in Watauga County long years before we had a hospital. The little two-room shack where he performed that operation still stands today, where he operated on a kitchen table.

This is his fiftieth year in practice. He began in Watauga County, as I said, before we had any hospital. He rode a horse, for there were no automobiles then. Many a time Dr. Perry would ride all night on his horse; carrying the instruments and pills in his saddle bag, and he would arrive in the middle of the winter at the home of a patient, and they would have to break his feet loose from the stirrups which had caked with ice.

Dr. Perry isn't here today. He is in the Legislature at Raleigh busy with some important mat-

ters and is unable to be here. We are very proud to present our candidate.

Dr. Sams: Thank you, Dr. Harmon. Is there a representative here from Wilson County Medical Society to discuss Dr. Bell briefly?

Dr. Henderson Irwin [Eureka]: I am not from Wilson County, but I have known Dr. Bell since 1922. One of the greatest things to be said about Dr. Bell is that he has had two heart attacks, was advised to quit work, but he had the guts to go ahead after each one and is still in active practice.

I think we all honor Dr. George Erick Bell because he is not only a Christian gentleman, but a civic minded man with a heart as strong as any Texas bull.

Dr. Sams: Gentlemen, we will now ask you to prepare your ballots.

The Speaker: Candidates, Gentlemen, are Dr. John Bullard Ray of Rockingham County; Dr. Henry Baker Perry, Sr., of Ashe-Watauga County Medical Society and Dr. George Erick Bell, of Wilson County.

Please write the name of your choice on the ballot and pass it to the tellers, and the tellers will take the ballots and tabulate them, and then they will come and give Dr. Sams the results of the ballot.

Dr. Sams: Mr. Speaker, as a result of the ballot on the General Practitioner of the Year of the State of North Carolina, I report as follows:

Elected Dr. Erick Bell. [Applause.]

The Speaker: Come up, Dr. Bell. [Applause.]

Dr. Sams: Members of the House of Delegates: Before I introduce Dr. Bell to you, I would like to entertain a motion from some delegates that we make Dr. Bell's election as General Practitioner of the Year unanimous.

[Upon motion regularly made and seconded, it was voted to make Dr. Bell's election as General Practitioner of the Year of North Carolina, unanimous.]

Dr. Sams: Gentlemen of the House of Delegates of the Medical Society of the State of North Carolina: It is now my pleasure, as Chairman of the General Practitioner of the Year Committee of the Society to present to you, Dr. Bell, of Wilson County, whom you have chosen as General Practitioner of the Year. I am not going to let him make a speech.

Dr. Bell: Gentlemen: You have certainly made me happy. As usual, I find myself without words to tell you how much I really appreciate it. I thank you though from the bottom of my heart, and I will try during the year and the following years not to do anything that will make you sorry that you have given me this honor. Thank you very much! [Applause.]

AMERICAN MEDICAL EDUCATION FOUNDATION

The annual meeting of the American Medical Education Foundation was held in Chicago, January 22, 1955.

It was well attended and there was considerable enthusiasm over the general situation so far as the work of the Foundation was concerned. However, it was felt that greater effort will of necessity have to be put into it on the part of the various states, partly by reason of the fact that the American Medical Association has withdrawn a part of its support, having given a half million dollars annually to the organization for its use since the corporation was formed in 1951. In studying the reports since AMEF was organized in 1951, our three medical schools have received a total of \$218,442.10 in cash grants with no strings attached as to how the money shall be spent. North Carolina doctors,

however, contributed less than six thousand dollars to the AMEF over the same period of time. We contributed seven hundred dollars the first year of the organization and three thousand and eighty-two dollars last year.

Studying the reports of the various other states as compared with ours, I develop a feeling of chagrin.

Therefore, it is recommended that the committees appointed this winter by Dr. Owens be continued for another year. A letter is going out to members of those committees before our state meeting in May. We are not on the bottom of the list so far as the states are concerned but we are too near it for comfort. It is my belief that an active Grassroots Committee Campaign such as has been set up by Dr. Owens will serve to improve our standing in the column of contributions to AMEF. This is certainly a worthy cause and deserves every consideration.

H. L. Johnson, M.D., Elkin
North Carolina Chairman

Dr. Johnson: I understand that there have been some questions asked regarding my report to this body on the American Medical Education Foundation, stating that approximately \$6,000 had been contributed by the Doctors of North Carolina for the American Medical Education Foundation. That does not include the amount of money which has been given by the doctors of North Carolina to the Medical Schools in this State or any other State. For example, in 1953, the three Medical Schools in North Carolina received \$22,476 from their alumni. All of the alumni are not in North Carolina, of course. In 1954, there were 58 doctors in North Carolina, who made contributions directly to the American Education Foundation in Chicago, and they gave a total of \$3,802.50.

Now, in 1954, also, the medical schools in North Carolina received from 559 doctors \$10,258.

I am sorry I do not have all of the figures that might be wanted, but I do know that the medical schools in North Carolina since 1951 have received \$218,000. Some one said a while ago that when they read my report that North Carolina doctors had given \$6,000 that his face got kind of red. Believe me, mine got red in Chicago at the first meeting I attended when I found that we had given \$700 and our medical schools had received about \$80,000 that year.

If there are any questions, I will be glad to try to answer them.

The Speaker: Do you have any questions of Dr. Johnson? If not, in conformity with our procedure, the chair will entertain the motion that this report, with the additions will be received.

[Upon motion regularly made and seconded, it was voted that the report, with the additions, be received.]

Report to the House of Delegates of the North Carolina Medical Society May 2, 4, 1955, by the Three Physician Members of the North Carolina Medical Care Commission Who Were Nominated for Appointment to the Governor by the Medical Society
J. Street Brewer, M.D.
Wm. M. Coppridge, M.D.
Harry L. Johnson, M.D.

As physician members of the North Carolina Medical Care Commission and representatives of the North Carolina Medical Society, we are pleased to report that during the past 12 months continuing progress was made toward providing the people of North Carolina with adequate hospital facilities and medical care.

Under the original Hospital Survey and Construction Act of 1946, commonly known as the Hill Burton Bill Act and recent amendments to this act, the following categories of medical and hospital fac-

ilities are now eligible for Commission aid toward the cost of construction and equipment:

- (1) Local general hospitals
- (2) Nurses' residences to serve local general hospitals
- (3) Health centers to house county health departments
- (4) Chronic diseases hospitals
- (5) Diagnostic or treatment centers for ambulatory patients
- (6) Nursing homes under the supervision of physicians to care for patients not acutely ill that need primarily medical and/or skilled nursing care
- (7) Rehabilitation facilities to provide medical, psychological, social, or vocational rehabilitational services to handicapped or disabled persons.

The North Carolina Medical Care Commission, at the beginning of its hospital construction program in 1946, designated the county as the hospital area throughout the State. The new hospitals and associated health facilities have been located usually either at the county seat or at the principal trading center.

However, there is a disproportion in the availability of medical facilities and medical services be-

tween rural and urban communities, and between high and low income counties. A need exists for facilities for the diagnosis or treatment of ambulatory patients—particularly in the rural counties—for the care of patients suffering from chronic illness, for rehabilitation facilities, and for nursing homes providing services under medical supervision.

The provision of such facilities to achieve a more equitable distribution and more effective utilization of medical services and equipment will permit early diagnosis or treatment and the maintenance of the patient's optimum health and maximum work capacity.

The 83rd Congress (1954) continued Federal support to the original Hill-Burton Program on a \$75 million yearly basis for the construction of hospitals, health centers and nurses residences. In addition, Congress authorized \$60 million each year for the next three years for the construction of medical facilities such as chronic diseases hospitals, diagnostic or treatment centers, nursing homes, and rehabilitation facilities.

Table A portrays the type and number of hospital facilities that have been constructed in North Carolina with aid from the Medical Care Commission since Federal and State funds first became available in 1947.

State of Completion	Local General Hospitals		State-Owned Hospitals		Health Centers	Nurses' Homes	Total No. of Projects	Total New Beds
	No. of Projects	New Beds	No. of Projects	New Beds				
Completed prior to March 15, 1954	58	3326	8	627	31	26	123	3953
Completed March 15, 1954, to March 15, 1955	14	584	0	0	14	8	36	584
Total Completed to March 15, 1955	72	3910	8	627	45	34	159	4537
Under contract March 15, 1955	4	321	0	0	7	1	12	321
Planning Stage March 15, 1955	13	444	1	100	5	3	22	544
TOTAL: July 1, 1947-June 30, 1955	89	4675	9	727	57	38	193	5402

The 193 projects approved by the Commission involved a cost estimated at \$78,277,713.66 of which Hill-Burton funds provided \$27,243,478.92; State funds, \$15,325,695.72; and local funds, \$35,708,539.02.

In regard to the expanded Hill-Burton Program, representatives of the Commission are currently making a State-wide county-by-county survey, not only to inventory the existing medical facilities, but also to obtain data that may reveal a need for one or more of these new facilities within a given area.

North Carolinians have gained considerable health benefits during the past eight years, and with these new programs in sight, even greater benefits may result.

Another activity of the North Carolina Medical Care Commission is to provide financial aid to assist hospitals that provide hospitalization for medically indigent patients. Last year the Commission paid \$309,207.00 to 128 North Carolina Hospitals that provided hospitalization for a total of 18,239 medically indigent patients.

The Commission's work of licensing hospitals has involved the inspection of 177 hospitals and clinics. In 1954, licenses were issued to 153 hospitals having a bed capacity of 13,279 beds, or 98.5% of all

general hospital beds in North Carolina. The hospitals that are not yet licensed represent, for the most part, physicians' clinics having less than 10 beds.

The licensing activity has been primarily an educational program designed to raise the standards of physical facilities of North Carolina hospitals chiefly from the standpoint of sanitation and fire safety. In an indirect way, the licensing program has been instrumental in providing higher standards of hospital and medical care.

In an effort to provide the rural areas of North Carolina with medical practitioners, the 1945 legislature authorized the Commission to administer a Student Loan Program designed to provide financial aid to medical students in return for four years of practice in rural areas having a population not exceeding 2,500 people.

Since 1945 the program has been expanded. In addition to medical students, students of dentistry, pharmacy, and nursing may now apply for a student loan. Furthermore, students of medicine and nursing may elect to practice after graduation either in a rural area or in a State-owned mental hospital.

Eighty-nine students have been approved for loans under the Student Loan Program. Of these

students, eight enrolled in the State-owned mental hospital program and the balance in the rural program.

Ten students of medicine have completed their training and are now practicing in rural areas. Approximately six years elapse from the time a loan is made to a medical student and the time he becomes licensed; consequently, the next few years probably will show a steady increase in the availability of physicians, dentists, pharmacists, and nurses in rural areas of the State.

In summary, although much has been accomplished toward improving the medical and hospital facilities in North Carolina, the task is not complete.

The 1955 Legislature thus far (1) has declined to appropriate additional State funds for construction to the Commission. Accordingly, when the accrued balance of State funds to the Commission's credit are exhausted, but Federal funds continue available, it will be necessary for the local sponsors to supply the entire cost of projects less the amount of Federal Funds available at the time. Federal participation at present is on a 50 per cent basis.

It is hoped that progress will continue to be made toward providing North Carolina with adequate medical and hospital facilities.

J. Street Brewer, M.D., Roseboro
Wm. M. Coppridge, M.D., Durham
Harry L. Johnson, M.D., Elkin

The Speaker: Report of Members of North Carolina Medical Care Commission, Dr. J. Street Brewer.

Dr. Brewer: Mr. Speaker and Delegates:

One thing that has come before us is the question of Chronic Disease Hospitals and not enough facilities. The latest regulations from Washington have not come to us yet. When they do, you and your various organizations will learn what is proposed and what can be done toward the creation of Chronic Disease Hospitals and diagnostic centers in North Carolina. Thank you!

Mr. Speaker: What will you do with this supplementary report?

[Upon motion regularly made and seconded, it was voted that the report and the supplement be adopted.]

The Speaker: There has been given to each of you a copy of the Cornell Medical College report on the Automobile Crash Injury Survey in North Carolina. Some of you know about this because you have had an active part in obtaining the facts which is the basis of this report. To those of you who do not, I will say that this survey is being carried on by a team from Cornell that came down here, and has been operating about two years now under a special grant.

The same procedure was applied to airplane crash injury a few years ago and resulted in some rather extraordinary improvements in the construction of aircraft. Many of the most important safety features which are combined in our modern aircraft developed as a result of this survey.

We were fortunate, I think, that Cornell should have sent a team to the State of North Carolina to undertake a similar survey with relation to motor cars. A little less than a year ago, they gave the Executive Council the result of their first season's operations. Their results were interesting and striking. I have not seen this current report, but I suppose it contains additional figures over a period of more than one season.

I think the Medical Society of the State of North Carolina can congratulate itself on having had a rather conspicuous part in this pilot work, and I trust that you all will want to take the time to

study and read this report as I intend to do. That requires no action.

We will now come to the item of a Report from the Executive Council.

REPORT OF THE EXECUTIVE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA TO THE HOUSE OF DELEGATES

As required by the By-Laws of the Medical Society of the State of North Carolina the following constitutes a record of the salient actions undertaken by the Executive Council in the interim of May 5, 1954 to and including April 30, 1955:

The Council met upon the call of Dr. Zack D. Owens, President of the Society, at Raleigh, North Carolina, Sir Walter Hotel, Sunday, September 26, 1954. President Owens presided. With the exception of one Councilor, all members of the Council were present and participated in the deliberations and actions of the Council.

The Committee on Finance reported through its Chairman, Dr. V. M. Hicks, a recommended budget for the fiscal period January 1, 1955 to December 31, 1955 in which it was recommended that specialty group organization within the Society consolidate all legal efforts under the general direction of the regularly employed Counsel of the Society rather than the employment of a separate counsel. This recommendation along with the recommended budget was adopted on motion duly made, seconded, and carried by vote of the Council. The following constitutes the certified budget as approved by the Council:

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA APPROVED BUDGET

January 1, 1955, to December 31, 1955

RECEIPTS: (estimated):	\$118,687.50
Balance January 1, 1955	Nil
Assessments (2200 paying members)	*\$88,000.00
Interest (Net)	287.50
Sales (estimated on 1953)	300.00
Author contribution cost of cuts	300.00
Revenue, unexpected (estimated)	250.00
Technical exhibits (estimated basis 1954)	8,000.00
Journal Advertising (estimated basis 1954)	21,000.00
**AMA Remittances 1% of 1955 dues processed	550.00
EXPENDITURES (estimated):	\$135,089.00
Schedule A	\$35,445.50
Schedule B	32,279.00
Schedule C	14,112.00
Schedule D	2,300.00
Schedule E	31,815.00
Schedule F	14,250.00
Schedule G	4,885.00

EXCESS OF RECEIPTS (estimated)
OVER EXPENDITURES (Minus) \$ 16,401.50

RESERVES (estimated): \$ 85,212.00

Bonds: \$84,312.00

Cost Value and Increment 900.00

Excess of 1954 income to be invested Nil

*Based on dues @ \$40 per member per annum.

**To be appropriated to Secretarial Budget (A-6).

APPROVED by action of Executive Council meeting in Raleigh, North Carolina, Sunday, September 26, 1954.

Respectfully,
James T. Barnes
Executive Secretary
Medical Society of the State of
North Carolina

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA APPROVED SCHEDULE:

Estimated Budget Accounts

January 1, 1955 to December 31, 1955

A. EXECUTIVE BUDGET:	\$ 35,445.00
A-1 President, expenses of (travel and communications)	\$ 1,500.00

A-2 Secretary-Treasurer, salary of	2,640.00
A-3 Secretary-Treasurer, travel of	1,200.00
A-4 Executive Secretary, salary of	9,000.00
A-5 Executive Secretary, travel of*	3,100.00
A-6 Executive Office, clerical assistants**	9,000.00
A-7 Executive Office, equipment for and/or replacements	1,200.00
A-8 Executive Office, expense of (12 months rent, communications, printing and supplies repairs and replacement of expendables)	6,000.00
A-9 Bonding (to 1957)	50.00
A-10 Audit	300.00
A-11 Taxes (salary tax)	305.00
A-12 Insurance fire, compensation and employer's liability	100.00
A-13 Membership Record System (addition to)	100.00
A-14 Publications, reports and executive aids	150.00

*Basis: Real for personal maintenance and travel and for official purposes.

**Any revenue derived from collection efforts related to AMA dues and processing of same shall accrue to this item of the budget.

B. JOURNAL BUDGET: \$ 32,279.00

B-1 Journal, Publication of	\$ 24,000.00
B-2 Journal, cuts for	500.00
B-3 Editor, salary of	2,310.00
B-4 Assistant Editor, salary of	2,640.00
B-5 Editorial Office, expense of (12 months rent, communications, printing and supplies, repairs and replacements)	400.00
B-6 Journal Business Manager's Office, expense of (12 months communications, printing and supplies, repairs, and replacements)	300.00
B-7 Business Manager's Office, equipment for	200.00
B-8 Journal, travel for (local and national)	200.00
B-9 Taxes (salary tax)	99.00
B-10 Refunds, subscriptions, etc.	30.00
B-11 Roster, publication of	1,600.00

C. INTRA-FUNCTIONAL ACTIVITY BUDGET: \$14,112.00

C-1 Executive Council, expense of and travel of councilors, including district travel	2,750.00
C-2 Councilors, expense of (communications printing and supplies)*	1,000.00
C-3 Legislative Committee, expense of (local and national activity)	3,000.00
C-4 Public Relations Committee, expense to National Conferences	350.00
C-5 Maternal Welfare Committee, expense of (secretarial, communications, productions, printing and supplies)	2,600.00
C-6 Rural Health Committee, expense of attendance to National Conferences	200.00
C-7 Cancer Committee, expense of	300.00
C-8 Convention Arrangements Committee expense of	300.00
C-9 Scientific Exhibits Committee and Audio-Visual Program, expense of	200.00
C-10 Committee on Mental Hygiene	500.00
C-11 Committee on Coroner System	250.00
C-12 Committee on Mediation, expense of travel, reporting service and communications	800.00
C-13 Committee in general, expense of	1,200.00
C-14 Committee on Anesthesia Mortality	400.00
C-15 Committee on Occupational Health	262.00

*Includes sums authorized by Chapter VIII, Section 2 of By-Laws.

D. EXTRA-FUNCTIONAL ACTIVITIES BUDGET \$ 2,300.00

D-1 Delegates to AMA expense of (3 to each annual and clinical session)	1,200.00
D-2 Conference dues	300.00
D-3 Woman's Auxiliary (cont. to entertainment)	500.00
D-4 Delegates to AMA Regional Conferences	300.00

E. PUBLIC RELATIONS BUDGET* **\$ 31,818.00

E-1 Assistant for Public Relations, salary of	6,600.00
E-2 Assistant for Public Relations, travel	2,100.00
E-3 Committee Chairman, out of State travel	300.00
E-4 Public Relations, clerical assistance	2,500.00
E-5 Public Relations, equipment for	1,000.00
E-6 Public Relations, expense of (12 months rent, communications, printing and supplies, repairs and replacements)	2,500.00

E-7 Taxes (salary tax)	218.00
E-8 Publications and Executive Aids	200.00
E-9 Radio-Motion Picture, production, distribution and printing	900.00
E-10 Production and distributing of reprints of periodical and press material for educational purposes	1,500.00
E-11 News and Press releases, production, distribution and printing	2,000.00
E-12 Public and personified activities in the field of Public Relations	800.00
E-13 High School Essay Contest	800.00
E-14 Collateral public relations with other committee activity	800.00
E-15 Salary Health Education Consultant	5,500.00
E-16 Travel Health Education Consultant	1,800.00
E-17 Clerical (part time)	1,200.00
E-18 Rural Health Conference***	400.00
E-19 Expense, (12 months communications, supplies, repairs and replacements)	700.00

*Authorized by action of 1949 House of Delegates with proviso that \$15 of annual dues (estimated to gross \$28,000) be specifically allocated and earmarked for the support of a public relations program. The division allocations are estimates only and may be changed within the total of the public relations budget.

**Total diminished by allocation to Rural Health as per policy established by the Executive Committee October 30, 1949.

***Plus any donations specifically contributed to program of Rural Health Conference.

F. ANNUAL SESSIONS (101st) CONVENTION BUDGET: \$14,250.00

F-1 Programs, production of	1,400.00
F-2 Hotel Convention expense	1,700.00
F-3 Publicity promotion, expense of (reporters and expense)	250.00
F-4 Entertainment (general, involving personnel)	400.00
F-5 Orchestra and floor entertainment	2,500.00
F-6 Guest Speakers (3) expense of and/or honorarium for	400.00
F-7 Banquet Speaker, fee and expense	200.00
F-8 Electric amplification	200.00
F-9 Booth installations, supplies, expense, signs (scientific and technical) including exhibit expense and promotion	3,500.00
F-10 Projection, expense of (service rentals)	500.00
F-11 Badges (members, guest, exhibitors, Auxiliary)	400.00
F-12 Reporting Service for transactions (sessions and sections-11)	2,000.00
F-13 Rentals, extra facilities for sections and/or exhibits any revenue derived as results of outside sale space accrues to this budget	800.00

G. MISCELLANEOUS BUDGET: \$ 4,885.00

G-1 Previous accounts payable	100.00
G-2 Refund (dues, etc.)	250.00
G-3 Legal Council, retainer fees for	2,000.00
G-4 Reporting (executive Council, etc.)	1,200.00
G-5 President's Jewel	60.00
G-6 Token, plaque and certificate, mats & promotion of GP of Year and 50 Year Club	150.00
G-7 Section (11) expense of (communications and printing)	125.00
G-8 Contingency and emergency	1,000.00

The above budget was presented to and approved by the House of Delegates May 2, 1955.

The Council heard a report in reference to the presence and functioning of one Vincent J. Daley as a practicing psychologist located in Southern Pines, North Carolina, following escapades in Michigan, Mississippi State Hospital and at Fort Bragg. By formal action of the Council, request is to be made of Fort Bragg officials for their cooperation in granting information relative to the indicated incompetence of Daley as a trained psychologist.

On motion duly made, seconded and carried the Councilor of the Eighth District was instructed to gain more information regarding the application of Charles L. Saunders, Jr., M.D., of Martinsville, Virginia in reference to his desire to hold membership in the Medical Society of the State of North Carolina while at the same time being a member of the Medical Society of Virginia.

On motion duly made, seconded and carried the Council recorded a support of the action of the Caldwell County Medical Society relative to the eligibility status of Alfred A. Kent, M.D., for membership in the county and state medical societies.

On motion duly made, seconded and carried the Council adopted a resolution reiterating the stand taken before in opposition to the corporate practice of medicine and suggesting the implementation of such opposition through appropriate legal channels.

Mrs. Powell G. Fox, President of the Auxiliary to the Medical Society of the State of North Carolina, appeared on the invitation of the Council and presented an outline of the program of activity which the Auxiliary would pursue during the activity year. She was commended for the Society by President Zack D. Owens for the past achievements of the Auxiliary and for their high ideals and goals.

Upon consideration of the extensive involvements in housing accommodations during the Annual Sessions, it was formally enacted that the Nominating Committee Chairman be allocated a large room for the function of his committee and that otherwise no specific change be ordered relative to the plan of housing.

On motion duly made, seconded and carried authorizing the local membership committee approve applications for interne-residency trainee memberships in the State Medical Society.

On motion duly seconded and carried the auto crash injury survey conducted during 1953 and 1954 by the Cornell Medical College here in North Carolina was approved for continuation and cooperation of the medical profession for the 1955 plan of survey operation.

Hearing a report from Dr. W. R. Berryhill in reference to the University of North Carolina Television facility and program, the Council adopted a resolution authorizing representation of the State Society on an Advisory Committee to meet and advise with the Program Committee of the UNC-TV on programs designed toward the education of the general public on topics of broad health service.

An extensive progress report of the Committee on Rural Health presented by the Chairman, Dr. F. C. Hubbard, was accepted.

A progress report of the Committee on Maternal Welfare was presented by the Chairman, Dr. James Donnelly, was accepted.

A progress report was presented for the Commission on Anesthesia Study by the Chairman, Dr. David A. Davis. On motion duly made, seconded and carried, the report was accepted as information and the Committee authorized to continue the study for another year and report back to the Executive Council.

On motion duly made, seconded and carried, the expenditure of \$257.00 to cover the costs of educational charts related to eye care from which a series of educational projection slides had been produced at an expense to the group on Ophthalmology and Otolaryngology was approved for payment.

In reference to the report of the Committee on Mental Hygiene indicating that the examining and clinical psychologists would seek an act in the 1955 General Assembly recognizing the group as an independent service in determining and classifying mental and emotional disturbances in a manner similar to medical diagnosis, treatment and prescribing, the Council adopted a motion authorizing the Committee on Legislation to actively oppose legislation designed to establish a certification of clinical and examining psychologists.

On motion, duly seconded and carried, the Committee on Mental Hygiene was authorized to enlarge its membership through additional appointments of

the President of the Society to the end that four subcommittees could be formulated within the Committee for special function on subjects of general mental health, alcoholism, narcotic addiction and rehabilitation.

On motion made, seconded and carried, the Committee on Mental Hygiene was authorized to exercise exclusion of cooperative Auxiliary Committee personnel when in its deliberations it was concerned with discipline and rehabilitation of members under emotional distress or difficulties.

Dr. O. Norris Smith presented the following report to the Executive Council on the subject of the Doctor's Plan of Insurance (Blue Shield):

"I am happy to report that our Committee has reached an agreement with the State Hospital Association in getting permission for a co-insurance rider to be sold on the Doctor's Plan. The addition of a \$25.00 rider will reduce the price 17 per cent. The addition of a \$50.00 co-insurance rider will reduce the price 27 per cent. We feel that this is a very great step forward and it will be a significant deterrent in keeping a good many patients out of the hospital who are going in as a matter of convenience.

"The second point is the question of payments for the surgical assistant. Our insurance program allows one fee for the surgeon, and we expect him to settle with his assistant, which they claim is splitting fees. Massachusetts has the most practical plan to our way of thinking. Blue Shield automatically allows 16½ per cent of the surgical fee to the assistant, and 16½ per cent of the fee to whoever does the follow-up care. The surgeon going out and doing the operation would get two-thirds of the fee directly, and the home doctor who assisted and who did the after care would get one-third of the fee.

"The third point of interest is that there are some industries in this state where the wage scales are such that the Doctor's Plan is inadequate to meet the needs of the employees, where they are looking for a program with a higher income limit than the present Doctor's Plan. Pennsylvania and many other states have had the problem and have introduced a second companion certificate with a higher income limit, with higher fees, and with higher dues.

"Our Committee is planning to make a canvass of the doctors of this state sometime during the winter with regard to setting up a companion certificate for incomes up to, perhaps, \$6000 on the family basis." On motion made, seconded and carried, the report was accepted.

Dr. G. W. Murphy reported in general for the Committee to Study a Cooperative Plan for Professional Liability Insurance. He concluded his report with the following:

"We recommend that the Society adopt as a long-range program a plan of procedure, an idea, an ideal, as outlined as follows:

The Medical Liability Program must be undertaken on a long-term basis, planned carefully and boldly, and stay with it for a sufficient period of time to allow the results to show.

There must be a sufficiently large number insured under the program to spread the risk adequately. This means the participation of not less than 65 per cent of the eligible physicians in the program.

Every physician must realize that the Medical Liability Program is an active and living one. He must realize that when any member of the group sustains a claim for liability, every physician in the group is injured thereby. The payment of the premium is only part of the individual's liability, and he must support the plan. He must learn what is required of him.

The State Society itself must take active steps to see that no actual liability occurs. Lectures, clinics, refresher courses should be organized. Every county medical society should have at least one meeting per year devoted to the instruction in liability prevention. The Society should regard the establishment of an active claim prevention service as a prime responsibility.

The group should do everything possible to insure that its Mediation Committee to deal with complaints as to professional conduct is active and respected.

A reliable insurance carrier willing to write the insurance on a long-term basis must be secured. The carrier must assure the Society that regard will be had to the suggestions of the Society as to the underwriting and as to the acceptance of applicants, although it will not be possible to make such suggestions mandatory on the carrier.

The carrier must undertake not to require members of the group to purchase other types of insurance as an inducement to the issue of professional liability policies.

The Society should nominate competent consultants in all specialties to whom the carrier may apply for service on problems arising.

The carrier must assure the Society that the personnel writing the insurance is especially trained in this type of insurance.

The carrier must agree that the burden of giving each individual physician the proper coverage is upon him and not upon the Society.

The carrier must provide for the processing of claims by personnel specifically trained in this work.

The carrier and the group, in cooperation, shall select a list of attorneys for the trial of liability suits, and the individual physician shall be allowed to select any attorney in his locality who is on the list to defend any suit brought against him.

The carrier as well as the group should institute adequate educational and claim prevention activities so as to keep the importance of this subject constantly before the individuals and the group."

Mr. President, I would like to move that we adopt that as a policy. On motion made, seconded and carried, the recommendations were adopted.

Dr. G. W. Murphy presented a further detailed report in reference to an underwriting proposal for professional liability insurance in prospect with a group basis for such underwriting but with approval of the Committee on Loyalty Group Insurance of the Medical Society of the State of North Carolina after further study, negotiation and legal approval of the plan and underwritings. On motion made, seconded and carried, the report was accepted and the Committee on Loyalty Group Insurance, of which Dr. George Paschal is Chairman, was authorized to survey the membership of the Society and otherwise conclude negotiations relative to such an insurance proposal for the membership.

A general report of the Committee on Legislation dealing with prospectuses for the 1955 session of the North Carolina General Assembly was presented and discussed. On motion made, seconded and carried, the report was accepted as information.

On motion, duly seconded, discussed and carried, the request of the Medical Library Association Committee on Gifts and Grants for contribution toward a national library scholarship fund was accepted as information.

On motion made, seconded and carried, authorization was given to secure and distribute copies

of excerpted and chartered information from Robert's Rules of Order.

On motion made, seconded and carried, the application of an Iredell County physician for Honorary Fellowship status after a legal settlement in the state from 1949 was declined.

Discussion attended the establishment of a rule in reference to a physician settled in the state as to eligibility for recognition in the Fifty Year Club founded by the State Society House of Delegates, May 1954. On motion made, seconded and carried, the rule is established that a physician, whether active or inactive, who can produce or for whom can be produced by his fellows acceptable evidences as having practiced medicine and in so doing has served humanity for fifty years and is now settled in the State of North Carolina, is eligible for recognition for the Fifty Year Club.

On motion made, seconded and carried, the instruction of the President that an unpaid visitor speaker's account at the Carolina Hotel, Pinehurst, be paid was approved.

On motion made, seconded and carried, the Executive Secretary was instructed to notify all section chairmen after their program was in hand that visiting speakers' expenses would not be paid by the State Society.

On motion made, seconded and carried, a communication from the N. C. Dietetic Association was accepted as information with instructions to the Executive Secretary that a letter be addressed to the Association secretary expressing thanks.

On motion made, seconded and carried, the Council took the positive stand that no member of the negro race now be a member of the Society and that in accordance with the Constitution such a one cannot become a member of the State Society until after one has been approved by the House of Delegates.

On motion made, seconded and carried, that the Council notify the Mecklenburg County Medical Society that the Council regards they are in error by taking action on negro membership until it has been approved by the House of Delegates of the State Society.

On motion made, seconded and carried, the Council authorized the procedure a Councilor's report be regarded as a personal report as to the conduct of physicians reported to the Council and that such report is not for publication and that the Councilor's report be absolutely censored in the discretion of the President and Executive Secretary of the Society.

THE SECOND MEETING OF THE EXECUTIVE COUNCIL

The Executive Council of the Medical Society of the State of North Carolina met at the Sir Walter Hotel, Raleigh, North Carolina on Sunday, January 30, 1955, with President Zack D. Owens, presiding, with all members in attendance except the Vice Speaker who was absent by reason of a West Coast appointment made prior to notice of this meeting and the Councilor of the First District. The invocation was adequately rendered by Dr. G. Westbrook Murphy. A report of the salient actions of the Council followed.

The first order of business was a report of the Executive Secretary on a survey of county medical societies as to prevailing policy on the diminishment of dues for expired portions of the dues years when accepting applicant for the first admission to the society. It appearing the vast majority of the counties practice a policy of diminishing dues, a motion was made, seconded and carried, that the survey information be sent to all county society officers with the suggestion that the eleven non-conforming

societies consider the adoption of a policy similar to the majority on dues diminishment.

Dr. Donald B. Koonce made an extensive report of the result, recommendations and findings of the cancer program survey conducted during 1953, 1954 and reported in early 1955, details of which appear in the record to be published in the transaction issue of the JOURNAL. On motion made, duly seconded and carried, the report of Dr. Koonce for the Cancer Committee was accepted as information.

Dr. Paul Kimmelstiel reported for the Committee on Blood Program on the conclusions summarized from the survey conducted through headquarters office as follows:

The supply of blood to hospitals is significantly better through affiliation with regional banks, affiliated hospitals being satisfied in 90 per cent, in contrast to 75 per cent in individual banks.

The operation of individual banks generally shows the following disadvantages:

The average distance donors must travel may be estimated as 20-25 miles.

In 20 per cent of local institutions there is uncertainty whether the bank is supervised by medical doctors. The majority of these are supervised by practicing physicians who undoubtedly must rely on the technical knowledge and responsibility of laboratory technicians. The great majority of these training schools, however, do not meet the minimum standard of the American Society of Clinical Pathologists. These technicians (M.T.) furthermore, according to their code of ethics, may render laboratory services without medical supervision. (We mean to imply by this that the majority of hospitals have blood banks that are conducted by technicians responsible for these services who, in our opinion, are not adequately prepared for their job.)

The accuracy of reports on transfusions reactions is doubtful. In the group of six counties with a total of 23,793 transfusions which gave a report of serious reactions, these occurred in twelve cases. In the remaining counties, with a total of 68,407 transfusions, no reactions were reported at all. From a statistical point of view, this discrepancy is difficult to explain unless hemolytic reactions have either not been recognized or have not been reported. The latter is the more likely assumption.

It is difficult to account for the extreme variation in the cost per transfusion. This variation cannot be related entirely to affiliation or non-affiliation of blood banks with regional banks, but additional analysis of 39 hospitals revealed that the average total transfusion cost for affiliated banks amounts to \$8.91 contrasted to \$12.58 for individual banks, a difference of \$3.67.

Those were the essential conclusions from a rather extensive survey that we made.

On the basis of this survey, we came to certain recommendations:

"A survey of the Blood Program Committee conducted with the assistance of the secretarial office of Mr. James Barnes was submitted in August, 1953. For reasons based on this survey it is recommended that the State Medical Society sponsor a system of regional banks to be established throughout the State of North Carolina, in addition to the existing regional Red Cross Banks."

That recommendation is made for two reasons. In the first place, it is to improve the accessibility of blood, to improve the recruitment of blood in such areas in which it is poor at the present time. Secondly, to improve the safety of blood service, because our survey has shown that in banks not affiliated with regional banks, in individual ones, apparently the control is poor, the technicians or supervision of the bank is inadequate; so errors

are more likely than in supervised banks or in such banks which are affiliated with regional ones.

"I. Statewide Organization.

"A. Director for the State System of Blood Banks

"The services of a professional (M.D.) director for the state system of blood banks should be procured. A fulltime director of one of the regional banks could be charged with this responsibility. His functions would consist of—"

I think I may qualify that because it may well be that it is impossible for any of the directors of a regional bank to take over the full duties of a statewide director. The functions of the full-time state director are as follows:

"1. Survey:

"a. During the process of development, the state director should make a survey, determine local needs, correlate the regional blood programs, and negotiate the sites of regional banks.

"b. He should continue a periodic survey and evaluation of the activities of all regional banks. All necessary information should be available to him for this purpose and he should in turn be responsible to a blood program committee of the State Medical Society.

"2. Consultation

"a. He should function as consultant to local regional banks supervising and integrating the needs of changing population density and hospital population. He should supervise the integration between blood banks, control the exchange of blood between individual banks as existing needs and policy indicate.

"b. He should specifically consult in the services involving rare blood types and administration of blood to complicated cases.

"3. Education

"a. He should be charged with education on a professional level with particular reference to the use and abuse of blood and on the lay level for the purpose of assisting the hospitals in their respective recruiting program.

"b. He should be responsible for coordinating the training of personnel by establishing a training system in the existing larger centers, thus providing an adequate source of competently trained technical personnel to meet the needs of the smaller outlying regional banks."

The pathologists anticipate that if such a system is to be created, technicians will be withdrawn into regional banks. There is a great shortage of technicians. We would have to see to it that other personnel will be trained for this purpose.

One member of our Committee, Dr. Ivan Brown, has told me that of course he would be glad to train any number of technicians needed for this system without cost, and I am sure the other schools will join.

"4. Equipment

"He should be responsible for purchase and distribution of equipment and materials for all regional banks."

In this way, we have a guarantee that all the equipment is alike that is used in all the regional banks for the purpose of interchange, and it also will reduce the price, of course.

"II. Organization of Regional Banks

"A. Integration of Existing Red Cross Regional Blood Banks into the Statewide system. "This would provide a background for the possible continued operation of existing Red Cross Regional Banks in the event that the American Red Cross in the future should feel that the existing centers impose too heavily upon available funds."

I think that is a mild expression of the fact. They are practically withdrawing on a national level and are leaving it to the regions to sustain what regional banks we have in Carolina, and, sooner or later, we are afraid that the Red Cross may be withdrawing from this program altogether. That is one of the reasons why we feel that something ought to be put in its place.

"B. Additional Banks

"1. Organization. Other regional banks should be organized after the fashion of existing Red Cross Banks." (with exceptions, of course) "All should meet the requirements of the National Institute of Health concerning blood banking. Each bank should be provided with a director who is a licensed physician, specifically interested in hematology, if possible, a pathologist. Larger regional banks may require the services of a full-time director. Smaller banks may find it advisable to procure the services of a locally available competent physician on a part-time basis. In this case an experienced competent technician, (AS CP) should assume relatively greater administrative responsibilities, and should be so trained in one of the centers. All technical personnel must meet the qualifications set by the State Blood Program Committee. All regional banks must follow a standardized technique of blood procurement and accounting system in order to facilitate the exchange of blood between regional banks which is designed to meet equitable distribution of blood, including unusual types, where necessary."

Some think the regional banks ought to be large like the ones we have in the Red Cross. Others think they ought to be very small. Agreement can be reached whereby regional banks may be distributed on perhaps something like a countywide basis.

"2. Recruitment.

The choice of recruitment methods is left to local regional banks which, however, will have to meet the needs as determined by participating individual hospitals. It is suggested that the responsibility for recruitment should be placed upon the participating hospitals in direct proportion to the numbers of blood units requested from the regional banks. Initially a two-for-one exchange should be encouraged in order to build up as rapidly as possible an adequate reserve."

I think about this particular point Dr. Wilson can give you further information, because he has used this sys-

tem for some time. If we are capable of making the Red Cross join with us, then they will probably ask us to let them continue in their present program of recruitment, which is different from the one that we propose to use, and in order to get a transition going and a gradual merging between the Red Cross and ours, we left the type of recruitment open for the time being so that there will be no conflict.

"3. Mobile Blood Donor Units should be supplied to each of the regional banks. These should receive blood from donors previously scheduled, preferably in outlying individual hospitals with the assistance of the hospital personnel under the supervision of responsible technical assistance from the regional bank and a local physician."

Recently, rather small mobile units have been developed which can be used for small regional banks.

"4. Delivery of Blood. The regional banks should be responsible for the delivery of blood, periodically, and in emergency cases.

"Individual hospitals should be provided with a reasonable working reserve of blood units of various types, according to the number of transfusions administered per month. It is the responsibility of the director of the regional bank to avoid waste of blood.

"III. Financies

"1. State Director. The expenses of the State Director should be borne collectively by the participating regional banks, proportionate to their relative volume of work. The initial sponsorship" (if it is necessary to make a loan, for instance) "during the process of formation of the statewide system may either be recovered by subsequent amortization, gained from income of regional banks, or North Carolina Medical Society may apply for a grant from one of the foundations (Commonwealth Fund, Rockefeller Foundation, and others) for this is in reality a national, rather than a regional problem."

One of the members of our Committee thinks that such a thing is possible, that a system of blood banks as we have it in mind may perhaps serve as a pilot undertaking and that one of the national foundations may undertake to underwrite it.

"2. Regional Banks

"They should be financed by the participating hospitals. These should reimburse the regional banks according to the number of units of blood used. The entire system and all regional banks must work on a non-profit basis. Typing of blood and performance of serologic tests should be included in the calculation of the expenses per pint of blood. Cross matching remains the responsibility of local hospitals."

On motion made, duly seconded and carried, the Committee was empowered to call meeting of representatives of larger centers, medical schools, representatives of State Hospital Association, representative of State Health Department; of Civil Defense; and, the Red Cross and to re-submit the plan to the Executive Council with a report of the results of the Meeting.

A progress report of the Committee on Rural Health was presented by Dr. Fred C. Hubbard, Chairman, entailing the following recommendations:

1. Sponsorship of the 4-H Health contest winner to the National 4-H Club Congress.
2. East-West Regional State Rural Health Conferences sponsored by the Society.
3. Publication of educational leaflet "Check your Health" for distribution to home demonstration clubs, and
4. Society sponsored subscriptions to "Today's Health" magazine to each and every boy and girl county health winner.

On motion made, duly seconded and carried the report of the Committee was accepted.

For the Committee on Public Relations Dr. Donald B. Koonce presented a proposal to sponsor in part the financing and direction of a survey of physician-press relations on a state-wide basis. On motion made, duly seconded and carried, the suggested plan of sponsorship and survey was approved.

The Committee on Loyalty Group Insurance of which Dr. George W. Paschal is Chairman presented a progress report which was discussed at some length as to difficulties which prevailed at the outset and which have arisen in the course of efforts to enact a group professional liability program. Apparently no specific action was taken by the Council on the report.

The Committee on Veterans Affairs of which Dr. Eden Alexander is Chairman reported on the em-passe apparently developing with the Veterans Administration relative to the intermediary plan of Home Town Medical Care of Service Connected Veterans.

"It is recommended that an agreement be entered into between the State Medical Society and the Veterans Administration. This contract will stipulate that there would be no reimbursement involved to the State Medical Society. For this reason, the V.A. Regional office of jurisdiction would handle all the administrative details incidental to the implementation of the out-patient care program. However, the Medical Society should furnish a list of participating physicians and develop a fee schedule which would be approved by the representative officials of the Society. Any amendment to the fee schedule would be proposed by the Medical group and handled by direct contact with the central office of the Veterans Administration in Washington.

"It is of interest that the Veterans' Affairs Committee of the Medical Society and the Hospital Saving Association at considerable trouble drew up a revised fee schedule a year ago, which was submitted to the central office of the Veterans Administration. Although it has been stated that this is under consideration, no direct recognition has been made of it. This, however, might be used as a point of negotiation with the Veterans Administration since no revision of the fee schedule has been made for more than five years and there are numerous inequities in the present fee schedule, particularly for some of the more frequent routine office procedures." This might be offered as a fruitful way in which re-negotiation would be carried out with the V.A. Central Office.

On motion made, duly seconded and carried, the report was received and the recommendations adopted.

Committee Advisory to Hospital Savings Association of which Dr. O. Norris Smith is Chairman presented the following report:

"Mr. President, the Doctors Plan is now avail-

able in two parts, enabling the subscriber to improve his hospital insurance program year by year until he reaches the complete Doctors Plan Coverage.

"This insurance is sold either with an \$8 ward or semi-private accommodation hospitalization certificate at \$5.50 a month, group family rate. The surgical schedule of the Doctors Plan is \$2.15 a month. The medical, including x-ray therapy, is \$1.85 a month. That makes a total of \$9.50 per month.

"The semi-private hospitalization is \$1.10 greater, so that for the semi-private and Doctors Program it is \$10.60 per month.

"Secondly, the complete Doctors Plan may be purchased like automobile collision insurance with \$25 or \$50 deductible co-insurance rider at a material saving in cost.

"We got into a rather philosophical discussion the other night. There are two other items I am going to bring up in connection with that. We started talking about what our original authorization was for this Committee, whether we had not been directed to get out an insurance program that would pay all the medical care for the really low-income group at a price that they could afford to pay and which we now realize we have certainly missed. It simply isn't possible when the hospitalization rate alone starts at \$5.50 and \$6.60. Obviously \$66 a year is the hospitalization coverage before the low-income group starts to worry about professional benefits. There are many lesser hospital certificates available, but we feel very much that the Doctors Plan has set a yardstick that the others can be judged by, and since that meeting I have looked up the original authorization, the resolution of 1947 adopted by the House of Delegates at Virginia Beach, and I would like to read a few points in it, because it surprised me that our Committee, subject to your approval, has got more authority than we thought we had. I am just reading extracts:

"That a representative committee be appointed by the President to review in the immediate future the whole question of hospital, medical and surgical insurance; that this Committee make specific recommendations as to any practical expansions of hospital insurance; that in particular this Committee outline a fee schedule for all surgical procedures and all major illness requiring hospitalization; that this Committee be empowered to change or modify the income group or conditions pertaining thereto as it sees fit; that the House of Delegates recommend that the members of the State Society voluntarily enter into a participating agreement to accept the fees made therein as payment in full for the above specified income group; and that the final report of the Committee be submitted to the Executive Committee of this Society for approval, and that approval shall constitute authority to proceed with the inauguration of the plan adopted."

We have not followed through with that. There has been several changes, and we have gone back to the House of Delegates each time on the question of income, for example, and other changes. I certainly think with such controversies as we have had with this program that we need to clear these things through the House of Delegates and not interpret that resolution strictly.

Our income limits for service benefits are unrealistic even for our relatively low-paid employees, and wholly unattractive for the higher-paid industries recently establishing plants in our state, even on the basis of the wage earner's income, disregarding additional income of a spouse.

We will make two recommendations to the House of Delegates this year:

We must recognize that continued inflation has lifted many workers above our present income limits, and that we follow the pattern of older Blue Shield plans in establishing a companion service insurance program for a higher wage bracket with family income below \$6000 and with professional benefits approximately one-third higher than our present program.

Secondly, that the income limits for our present program be adjusted upward to \$4200 for the family without change in current professional benefits.

Our Committee also hopes to find a solution to the problem of fees for surgical assistants thereby correcting the alleged splitting of fees which many conscientious surgeons feel exist in the present agreement. As you know, fees are now paid for surgery to the surgeon who does it, and he in turn has to pay his assistant.

A report emanating from the medical director of the National Foundation for Infantile Paralysis relating to the impending introduction into use of the Salk Vaccine for broad distribution for immunization of children was presented in letter communication form. Upon motion, duly seconded and carried, the report was received as information.

On motion duly made, seconded and carried, the Council adopted a resolution to the effect that it was aware of the opposition of the legislative committee to an increment on the privilege license tax in North Carolina and that the Council supports Committee in their actions in accord with their best judgment.

Cognizance was made of an enactment in the Commonwealth of Virginia related to exclusion clauses in insurance certificates of prior existing conditions and on motion made, duly seconded and carried the "rider" was referred to the legislative committee as a suggestion.

On motion made, duly seconded and carried, letters were authorized to be written each physician member of the legislature expressing thanks to them for the time and services contributed in coming to the legislature.

On motion made, duly seconded and carried, a progress report of the Chairman of the Committee on the Coroner System study and legislative recommendation was approved as to past actions with commendation expressed to the Chairman, Dr. Wiley Forbus.

The progress report of the Committee on Nursing was received including a recommendation that the Society be represented in a joint meeting related to the so called "grandfather clause" in the 1953 Nurse Education and Registration Act enacted into law. On motion duly made and seconded the Council accepted the report and authorized the representation requested in the conjoint meeting of nurses, hospitals and physicians.

Dr. James P. Rousseau, President-Elect, presented a verbal communication from the federal agent domiciled in North Carolina in relation to the transfer by proposed act of Congress of the Bureau of Narcotics from the Treasury to the U. S. Department of Justice. On motion made, duly seconded and carried, the report was received as information.

On motion made, seconded and carried, the Council authorized that information related to proposed federal narcotics act and administrative changes be sought from the AMA WASHINGTON OFFICE through Dr. Frank Wilson.

On motion made, seconded and carried, a communication from the American Association of Physicians and Surgeons related to a battery of legislative proposals now introduced in the 84th Congress was referred to the Legislative Committee.

On motion duly made, seconded and carried, the report of the Committee on Mental Hygiene was

adopted by which it opposed any legal changes in respect to license, certification or registration of psychologists; and, by which it favored legal provision for the deletion of the legal restrictions which bars epilepsy in an individual seeking health certificate for marriage.

Report of the delegate, Dr. George W. Paschal, to the Governor's Safety Conference, December 1954 was presented and on motion, seconded and carried, the report was accepted.

On motion of Dr. Donald B. Koonce the Council went on record as requesting that the Board of Medical Examiners give equal consideration to approved (Council on Education and Hospitals of the American Medical Association in accreditation of hospital for interne training) for foreign resident-physicians. The motion was duly seconded, put to a vote, and carried.

A federal proposal to tax, by regulation, payments made to employees as compensation for loss of wages in sickness and injury incidence was referred, by motion made, seconded and carried, to the Committee on Legislation.

On motion made, seconded and carried, the Council declined a procedure to rescind some alleged action in respect to considerations placed before the Council in 1952 by Dr. Alfred A. Kent, Jr.

On motion made, seconded and carried, Doctors Cyril Evans, Otto Kramer and Siderer Ing of the North Carolina Sanatorium staff were authorized to be notified of their qualifications to apply for membership through the county medical society.

On motion made, seconded and carried, the matter of Dr. Henry B. Dorr was referred to Dr. J. G. Raby as Councilor for disposition as he sees fit to rule and that the party not favored be notified by him in writing and that both parties have a right to appeal his decision to the Council.

On motion made, seconded and carried, the letter suggesting a "professional relations committee" was received with instructions that the writer of the letter be advised that the Committee on Hospitals and Professional Relations would properly handle matters of professional relationships.

On motion made, seconded and carried, the referred simplified insurance forms received from the American Medical Association were referred to the Committee on Insurance.

The Council Meeting adjourned at 6:15 o'clock P. M.

I hereby certify the foregoing to be a concise statement of the salient proceedings and actions of the Executive Council for the year May 5, 1954 to April 30, 1955.

Zack D. Owens, M. D., President
Medical Society of the State of
North Carolina

Attest: James T. Barnes,
Executive Secretary
April 30, 1955

The Speaker: May I say for your information that this report covers the activities of the Executive Council over the period of a year, including the approved budget for the year now in progress, and is a valuable document, but in the course of the presentation of these Committee reports with their amendments, resolutions, etc., that are brought to your attention, you will be made aware, so far as I know, of all of the meat that is contained in them. Do you care to pass the motion that this report be accepted without being read.

[Upon motion regularly made and seconded, it was so voted.]

Dr. Hill: For your information and probably adoption, the following action was taken in Executive Session of the Executive Council last night

to be presented at the first session of the House of Delegates for immediate release to the press:

"For the past five years, the Medical Society of the State of North Carolina has had under study the problem of integrating the Negro members of the profession into the professional activities of the Society (a committee is to report its recommendations at this session). During this time a component county society (Mecklenburg) of the Medical Society of the State of North Carolina, without consultation with the established authorities of the State Society, has taken premature action on its own initiative by admitting to its membership Negro physicians before the Society as a whole could establish its own new policy with regard to the situation. This action of the county society was contrary to the recognized policy of the State Society.

The Executive Council censures the Mecklenburg County Society for taking such premature action and requests that it and other county societies desist from taking any similar action until the State Society can accomplish a satisfactory program and policy to meet the situation.

The Executive Council commends the President of this Society for bringing this matter to the attention of the Society through this Council in accordance with his sworn oath to uphold the constitution and by-laws of the Society and the honor of the high office in which he is now serving."

Mr. Speaker, I move that this be accepted as the will and pleasure of the Executive Council.

[The motion was seconded.]

The Speaker: I wonder if I could say a word from the standpoint of a parliamentarian about this particular matter? May I say to you that this does not concern whether or not Negroes should be members of the Medical Society in the State of North Carolina. That issue is one which you will have ample opportunity to discuss before this meeting is over. This deals entirely with another matter. The Executive Council has said that in its opinion one of our component societies has taken an action which is contrary to the accepted and established policy which was under the process of formulation, and it is believed that society should not have done so. It says they want to tell them that they have done so and ask other societies not to do likewise. That is the problem before you. At the direction of the Executive Council, the Constitutional Secretary has presented this resolution and has moved its adoption. It has been duly seconded. Is there discussion? Discussion ensued.

Dr. George Grady Dixon [Ayden]: I want to offer a substitute motion, that this report be deferred until after the report is discussed and acted on.

[The motion was seconded by Dr. Crowell.]

The Speaker: The motion is that this matter be deferred. It was duly made and seconded. All in favor of deferring it, please say aye; all in favor of not deferring it, please say no. The motion is lost.

The original motion was that the resolution as recommended by the Executive Council be adopted. Is there any discussion? If there is no further discussion, all in favor of that please say aye; opposed, no. The "ayes" have it, and the motion is passed.

Now let's turn to the reports of the Committees - - Mediation, Dr. Joseph A. Elliott.

Committee on Mediations

In June Drs. Brewer and McMillan met with the secretary of the Mediation Committee to brief him on the activities of the committee and instruct him as to his duties. This was a very important meeting as far as the secretary was concerned for in a short time a number of complaints were received. As a result of the instruction given me, I was in

a much better position to proceed with investigations and obtain the necessary data for consideration by the entire committee.

As each complaint was received, a copy was sent to the chairman of the committee and one to the councilor of the district in which the involved doctor resides with the request that the councilor make a thorough investigation of the complaint and report his findings to us as soon as he could conveniently do so. We found the councilors very cooperative and, with the detailed information furnished by them the committee was in a much better position to judge the merits of the complaints.

Chairman Murphy had the committee called to meet in Charlotte, December 19, 1954, to consider thirteen (13) complaints. While a number of the complaints were of a serious nature, the committee was able in all but two cases to make recommendations which apparently were accepted as we have not had further communications from the complainants. In the two cases not settled, we had not had time to complete the investigations at the time of our meeting. These will be considered at our May meeting.

In all cases where possible we have tried to bring the complainant and the doctor together in an honest effort to settle their differences. If this can be done, most cases can be satisfactorily settled and better public relations maintained.

Joseph A. Elliot, M.D., Secretary
Charlotte

G. Westbrook Murphy, M.D.,
Chairman, Asheville

J. Street Brewer, M.D., Roseboro

Frederick C. Hubbard, M.D.,

N. Wilkesboro

Roscoe D. McMillan, M.D.,

Red Springs

[Adopted]

Committee on Liability and Group Loyalty Insurance to Work with North Carolina Insurance Commissioner

Your Committee was represented at the Hearing of the North Carolina Commission of Insurance at the time the petition was made for an increase in rates. We feel that the representation made by the Society's officers and its legal counsel were particularly instrumental in keeping the rates as low as are currently in effect.

The Loyalty Group Insurance Committee, following instructions from the Executive Council, has made an effort to find a solution for the problem of obtaining professional liability insurance on a group basis for the membership of the Society.

The Committee prepared and circulated among the membership a questionnaire to determine the sentiment of the Society concerning its participation in a group type of program.

Agents for one company indicated their willingness to underwrite such insurance and made a proposal to do so, provided there was approximately 65% participation of the membership. Responses to this questionnaire have been received from 1294 members; 1118 members indicated their approval of the program and their willingness to participate in it; 111 indicated their lack of desire to participate; and, 45 were uncertain and undecided.

Following the circulation of this questionnaire your Committee was approached by a second insurance company which indicated their interest and willingness to write a group type Professional Liability Insurance Program for our membership. This company desires to sell in addition to professional liability Insurance, other forms of insurance such as, Owners', Landlords', Tenants', etc. This company reserves the right to cancel individual poli-

cies in such a manner as is currently done among other underwriters. Neither of these plans seems to offer to the membership anything different from what the doctors now have through insurance which they have acquired individually. There is a prospect that the premiums may be lessened if there is group participation.

Your Committee feels that there is much to be done in an educational program which would be entered into by the doctors, the lawyers, and the insurance representatives. No final decision has been reached by the Committee and it is not prepared at this time to give a specific recommendation in view of the fact that we do not have the required number of willing participants to the program. Further consideration and study of the problem is now in progress.

This report is respectfully submitted.

G. W. Paschal, Jr., M.D., Chairman
Raleigh

J. Bivens Helms, M.D., Morganton
Herschel C. Lennon, M.D.,
Greensboro

Alban Papineau, M.D., Plymouth
Robert A. Ross, M.D., Chapel Hill
Nathan A. Womack, M.D.,
Chapel Hill

Dr. Paschal: Mr. Speaker and Members of the House of Delegates and Gentlemen: Some time ago, your Committee was instructed to try to seek a solution to the problem of securing professional liability insurance on a group basis for the membership. Pursuant to that, we issued and sent out a questionnaire which most of you have seen or had the opportunity of seeing, and to which we requested an answer. We circulated some 2,900 questionnaires, and from that we received something over 1,200 replies.

Prior to the time of the circulation of the questionnaires, we had been in consultation and had had some talks with representatives of the insurance companies who agreed to underwrite this program on a group basis. They made that agreement under the provision that we would secure 65% of our membership to participate in this program. As you can see from the results of our questionnaire, we failed to secure the 65% of the membership to indicate their agreement to participate in the program, and consequently we feel at this time that we have no group plan to submit to the membership of this Society.

During the course of these procedures and consultations, we encountered a second company who indicated their willingness to underwrite the Society on a group basis. Both of these insurance companies desire to underwrite additional forms of insurance which in reality puts us in somewhat the same situation that we were confronted with at the time that Aetna cancelled the contract that we presumed we had with them.

Aetna, as you know, is probably the primary writer of insurance in this field in North Carolina and at the expiration of what we thought was a contract and upon more favorable study, we found that we actually had no non-cancellable clause with them, and that we did not have an actual group policy. We felt further that Aetna tended to coerce the membership somewhat in seeking to secure additional forms of insurance which were of a more profitable nature than the professional liability type of insurance.

I don't know what they are going to do about getting the group form of insurance. Our legal counsel advises us that in the true sense a group type of policy is contrary to the statutes of North Carolina. However, in a broad sense we feel, and

we have reason to believe that the Insurance Commissioner would not disapprove of our active participation with any individual company in writing what is alleged to be a group type of policy. They are still working on the problem, and while we feel that the effort toward securing this group policy as we had originally hoped for has fallen through, we think that this problem is one of sufficient gravity and importance to demand the close attention and continued study of the Insurance Committee of your State Society. We believe that possibly some satisfactory program could be worked out in which the membership of the Society took an active part, which would lead to a reduction of the premium rates as they now exist and possibly the lowering of these rates, and at the same time greatly reduce the incidence of claims that are put forward by discontented patients.

When we started trying to find the solution to this, there were several in the membership who were not able to obtain professional liability insurance. They were practicing without it, and they had no such insurance even though they stated they had made an effort to find it. As of this date, I learned that these few individuals have acquired insurance at this time, and I know of no one in the Society who wants insurance that is not able to get it.

The rate in North Carolina is more favorable than it is in some of our adjoining states, and at the present time most of the insurance is being written by five different underwriting companies.

The plan that has been put forward by one of the insurance companies and has been found to be very effective in the reduction of claims and the reduction of premium rates in Oklahoma calls for the active participation of the membership of the Society.

Your Committee feels that such a plan could be operable even in conjunction with the five different companies or all insurance agencies who underwrite this type of insurance, and that with organization and education in this field for both the profession and the laity, we will probably be able to carry on a program which would bear fruit and reduce the premiums and reduce the number of claims.

As I have said, the Insurance Committee is going to work on this problem and we are in the process of trying to work out some satisfactory organized system or structure within the Society, State, District, County and local levels, in which we would have what might be called the Professional Liability Insurance Committees that would screen these cases, do what they could in their own capacity to dissuade any possible claimants, and at the same time protect our own membership.

It is a problem that your Committee does not have an answer for today, but I suggest and I hope, that the work will be continued and that some adequate plans might be accomplished. Thank you, Mr. Speaker.

The Speaker: Do I hear a motion that Dr. Paschal's report be received?

[Upon motion regularly made and seconded, it was voted that the report be received.]

Dr. L. R. Hedgepeth: A good many in our County have thrown survey inquiry blank in the waste basket and since then they have said they would be glad to apply for the insurance.

The Speaker: I am afraid it is a little late for them to change their minds now. Am I right in saying that the Plan has been abandoned for the time being at least?

Dr. Paschal: Yes.

Medical Advisory Committee to Hospital Savings Association Blue Shield Plan

In 1947, the House of Delegates authorized this Committee's hard-working predecessors (1) to review the whole question of (medical) insurance, (2) to make specific recommendations as to any practical expansions of hospital insurance, (3) to outline a fee schedule for all surgical procedures and all major medical illnesses; and, (4) to change or modify the income group subject to the approval of the Executive Committee; at the same time it recommended that members of the Society sign the participating agreement to accept the fees names as payment in full for the specific income group. We feel it is desirable for the House of Delegates to pass on such important changes, rather than to have our small committee do so.

Some doctors expected the plan to provide complete hospital and professional benefits at a cost within the reach of all families in the very low income group. Such a Utopian assignment was not mentioned in the 1947 motion, was not feasible at that time, and is even more impossible at present, when hospital charges paid by HSA approximate \$17.50 per day, and hospital expenses absorb about 60% of the cost of the Doctors' Plan.

1953 Family Survey of Medical Costs:

FAMILIES	ANNUAL INCOME	HEALTH INSURANCE COVERAGE
"Upper 1/3"	more than \$5,000.	80%
"Middle 1/3"	between \$3-5,000.	71% 63% of
"Lower 1/3"	less than \$3,000.	41% all families
Lowest	(5% on welfare)
	20% (15% less than \$2,000.	30%)

What health insurance is available for the lower income groups? Surveys show that 30% of families below the \$2000. income level have some health insurance, 41% of those below \$3000., 71% of those between \$3-5,000. and 80% of those above \$5000. Over 900 insurance companies offer health and accident insurance coverage of widely varying effectiveness, ranging from low to high cost. Persons with insurance spend more for personal health services than those without, partly because prepayment protection increases with ability to buy, partly because costs are cushioned, and partly because foresight is part of intelligence; under voluntary prepayment health insurance, more people eventually pay more money for health needs. The doctor is shortsighted who does not encourage his patients to buy some protection within his present means, to be increased towards the complete Doctors' Plan as his income rises. The more help from insurance the patient gets to pay the hospital, the better his chances of paying for professional care—the older doctors in practice during the depression fully appreciate this fact, but many younger doctors are not convinced of its importance. Health insurance helps to stabilize the finances not only of subscribing members, but also of participating hospitals and doctors.

1953 Family Survey of Medical Costs

(in billions of dollars)	INSURANCE
TOTAL ANNUAL CHARGES	PAYS
for personal health services	\$10.2 1.5 (15%)
PHYSICIANS (37%)	\$3.8 \$0.5 (13%)
Surgery (21%)	0.8 0.3 (38%)
Obstetrics (11%)	0.4 0.1 (25%)
Other M.D.'s (68%)	2.6 0.1 (4%)
HOSPITALS (20%)	2.0 1.0 (50%)
MEDICINES (15%)	1.5 *
DENTISTS (16%)	1.6 *
OTHER SUPPLIES (13%)	1.3 *

*less than \$50 million

80% of families with health insurance obtained it through their place of work or through an employed group. Employers (and labor unions) are attracted by the Doctors' Plan except for the fact that we offer extra (service) benefits to certain employees but not others, based upon family income at which they can only guess; much suspicion and unrest would be created by attempts to get such information; they are usually not in the mood to buy such a "pig-in-a-poke." Even our lower wage scale textile mills find our income limits unrealistic, and the higher-paying electronic and chemical industries spreading into North Carolina, accustomed in other states to even higher health benefits for their employees, are not attracted by our present program. During the first 9 months of 1954, there were established 184 new or expanded industries in North Carolina, providing a potential 13,200 new jobs, exposing more and more rural inhabitants to industrial employment.

The U. S. Department of Commerce reports that approximately 4% of personal income goes for personal health services and supplies. Approximately half of this money is for hospitalized illness, borne by 10% of the population. It would seem practical for a family to invest 2% in good hospitalization insurance including professional benefits. Even at group rates, the complete Doctors' Plan (family) would cost more than 2% of family income at any figure below \$5000; the HOSPITAL family certificate (without professional benefits), could be purchased with 2% of a \$3000. income; the individuals complete Doctors' Plan cost 2% of \$2400. Only when industry pays part or all of such cost, is our present plan being sold to the low income group, but we believe it is the best hospital insurance available—the yardstick by which other insurance can be measured.

The biggest and most successful Blue Cross and Blue Shield Plans have smoothly met this inflationary problem by adding a companion certificate with higher income limits, and higher professional benefits, without need of increased hospital benefits. The Michigan Plan originated about 1939, and its income limits offered service benefits to 80% of employees in that state; by 1948, less than 20% of employees were eligible for service benefits because of increased income, and a companion higher-income certificate with higher benefits was established to again offer service benefits to 80% of wage earners—both certificates are now available. Maryland, Pennsylvania, New Jersey and Massachusetts offered similar companion plans for different income groups.

KIPLINGER REPORT ON FAMILY INCOMES:

1. Since 1945, the median per capita income has risen from \$2,300 to \$3,800. Those with incomes below \$3,000 have diminished, those above \$5,000 increased, those between \$3-5,000 have remained constant.
2. MARRIED) 79% make less than \$6,000
COUPLES WITH) 65% make less than \$5,000
TWO CHILDREN) 45% make less than \$4,000
3. ONE OUT OF EVERY FOUR WIVES HOLDS A JOB: only 15% of wives who have children work, and the majority of these work only part-time.
4. MEDIAN)
INCOME IN) married men \$3400)
THE SOUTH) working wives 650) Total \$4050

The Committee is also studying the matter of "catastrophic" rider, extending major benefits beyond the usual 70-day limit. Other Blue Shield Plans have such riders for the individual at \$1.00 per month (\$2.00 for the family), and this would offer a tremendous additional value in health insurance to our subscribers.

The Doctors' Plan is too expensive for the income groups specified for service benefits, and too unattractive without service benefits to the middle-income groups who can afford it without assistance from their employers. There is a great demand in this middle-income field for good insurance which we are neglecting. Should we curtail benefits and offer a cut-rate partial protection for lower-income groups and rural citizens, or should we realistically raise our income limits with some increase in professional benefits? We must do one or the other to fulfill a more effective role in the health insurance program.

The Committee is preparing factual data and slides for presentation to district and county medical societies, in the hope that ALL our members will become better informed on the many important aspects of health insurance, and be better prepared to act upon proposals that will be developed during the coming year. Insofar as possible, the members of this committee will act as speakers for the medical societies in presenting the program.

We recommend, that THE HOUSE OF DELEGATE URGE EACH CONSTITUENT COUNTY SOCIETY TO DEVOTE ONE PROGRAM THIS YEAR TO THE SUBJECT OF HEALTH INSURANCE, PRESENTING THE FACTUAL DATA WHICH WILL BE AVAILABLE FROM THIS COMMITTEE.

O. Norris Smith, M.D., Chairman
Greensboro
H. H. Bradshaw, M.D.,
Winston-Salem
Eleanor Easley, M.D., Durham
Willard C. Goley, M.D., Graham
Amos N. Johnson, M.D., Garland
Arthur H. London, Jr., M.D.,
Durham
Karl B. Pace, M.D., Greenville
John S. Rhodes, M.D., Raleigh
Charles T. Wilkinson, M.D.,
Wake Forest

Dr. Smith: Gentlemen: The Executive Council asked me to present to you today some data that they were shown yesterday in connection with the problems of insurance.

There is a lack of Understanding of insurance problems on the part of our members that we hope to rectify during the coming year. Our Committee has certain recommendations that it is prepared to present at this meeting of the House of Delegates, but we felt that it was premature.

We have withdrawn the recommendations, with the exception of one, that we are asking every County Society to devote one meeting during the coming year to the question of Health Insurance and to present at that time the type of data that this Committee will make available, some of which I will present briefly now. These same slides and a few others are on automatic exhibit at our desk out in the lobby. It is arranged so that the slides change every 30 seconds—that is a little fast for some of them and it is slow for others, but there is also an additional button there, that you can make it change quicker out there.

I am just going to check the high points, get you interested enough in it to study these slides as they flash out in the lobby, because they are extremely important in understanding this problem.

[Slides.]

This first slide is an attempt to show you the overall problem as it faces the public. I call your attention to the fact that the complete cost of medical care to the public is \$10,280,000,000 a year, of which insurance at present pays only 15%. In a breakdown of this figure, the Hospital charges

constitute 20% of this total, and insurance pays roughly 50% of hospital charges.

Professional charges constitute 37% of the total, and insurance pays 13%.

But in sub-dividing this, 20% of this total is surgical, of which insurance pays approximately 40%, 11% is obstetrical, of which insurance pays 25%, and 68% is for all other medical services, of which insurance pays only a paltry 4% at present. That condition is improving.

Another point to be gotten from this slide is the fact that if you add this 2 billion here, the hospital costs, the \$800,000,000 for surgery, practically all of the \$400,000,000 for obstetrics, and a vague amount of this, 2.6, which would be for hospital care, we arrive at an estimate of approximately 50% of this \$10,000,000,000 which goes for hospitalized illness, and that our Committee feels is the province where insurance has its greatest opportunity.

[Slide.] How good is our present insurance?

I call to your attention, the fact that approximately 50% of health insurance is Blue Cross and Blue Shield, and these figures apply primarily to that because most commercial companies give their salesmen a commission of 25% on direct sales and somewhat less on the group sales to start with. But half of insurance certificates for hospital coverage pay 89% of the hospital bill, or more. Half of the certificates for surgical benefits pay 75% or more of the surgical charges; half of the certificates with obstetrical benefits pay at least 60% of the obstetrical charge.

[Slide.] This is a survey of families throughout the country two years ago. You will notice at the top that the annual cost of all personal health services, \$10.2 billion, breaks down to an average of \$207 per family. Nine percent of the families had no medical expense, 50% of the families have less than \$110 expense. We are not concerned with relieving them of that \$110 expense, from the insurance standpoint. We feel that certainly most budgets could handle it without strain, certainly without being bankrupted. But I call your attention to the last three items, namely, 7% reported expenses of more than \$495, 2% expenses equalling half of their entire income, and 1% medical expense equalling their entire annual income.

[Slide.] Who has insurance? The population can be divided into three groups on an income basis. In the upper third, there are those who receive more than \$5,000 a year, and 80% of them have some sort of health insurance. In the middle bracket, between \$3,000 and \$5,000 income, 71%. In the lower income, less than \$3,000, 41% of families have health insurance. On the over-all total, 63% of families have some coverage.

I call your attention to the fact that surprised me, that in the lowest 20% of the population, 5% of them are on welfare, one family in twenty, and 15% of them have incomes of less than \$2,000, and 30% of them have some sort of insurance.

[Slide.] Insurance does not make medical care cheaper. People who have insurance spend more money just for health coverage, just as people who buy cars on the installment plan, spend more money for automobiles. Under voluntary pre-payment health insurance plans, more people eventually pay more money for health needs.

[Slide.] In 1920, the average cost per person per day in all hospitals was estimated to be \$2.00. In 1935, the average cost was up to \$5.50.

[Slide.] In 1951, the cost was up to \$9.17, and between 1951 and 1952, it went up another 10% to \$21.00. Last year it went up still another 5%. In the intervening years, I don't know the exact figures.

[Slide.] The hospitals have a problem that we have to recognize. 60% of the dues for the Doctors' Plan goes to the Hospitals. The other 40% covers his professional charge. Hospital operating costs went up from \$438 million in 1935, almost six and one-half times by 1952. It has more than doubled in a six-year period here.

[Slide.] On this chart I would like to call your attention to two things. First, the average length of stay has dropped from 13 to 9.6 to 8.9, and in North Carolina it is a little less than this, at least in the experience of Blue Cross. Unfortunately, I fear it is due to a great many two-day and three-day admissions that we will have more to say about a bit later.

The other point in question is that of admissions per thousand population. There were 55 per thousand and back in 1935, 108 here. These are figures from a survey made of the entire country. For all Blue Cross Plans, the average for this figure is 127 last year. In New York City, Blue Cross Plan does not offer as attractive hospital benefits in the form of free X-ray as we do. That figure here is in the high nineties, less than 100. In Washington, D. C., they have a similar situation, and it was less than 100 until this year, and they are up to 102 and 194 right now, and they are screaming and wondering what to do about it.

Here in North Carolina we are approaching 170. Gentlemen, those extra admissions are the things that make hospital insurance exorbitantly expensive in North Carolina, and we doctors have got to recognize our responsibility to save the insurance program, both of Blue Cross and commercial, and to save our necks by being a little bit more cautious about whom we toss into the hospital.

[Slide.] Here's a chart in North Carolina. This is Hospital Saving experience here since 1940. This is the length of stay coming down from a little over 9 days to less than 7 days. This is the increase in the number of beds. We were around 8,000 ten years ago, and with the Hill-Burton Act, we are up to 13,000, and the people are expecting insurance to pay for those extra 5,000 beds.

But here is the cost per diem that Hospital Saving has paid. It used to be \$4 in 1940. It jumped right after the war, and look where we are going now. At present, as I told you, it is approaching an incidence of admission of 170, and now they are up something around \$17 per day.

There are three factors that do fundamentally make up the insurance. If you have a thousand people come and buy insurance and the admission rate is 108 per year, and if the average registration is 8 days, and if the average cost is \$17.50 a day, you can sit down and by simple arithmetic add the cost of overhead, of administering the program, plus commissions for sales, plus profits, plus anything else you want to get out of it, divide the total by a thousand, and that should give you a premium that ought to hold up.

I would like to show you some of the headaches of the insurance business, and thank the Lord, says my Committee, we did not go into it, because the facts don't work out the way you want them.

[Slide.] This is another supplementary slide, much like the other one. The lower dotted line is the incidence in admission per thousand participants for the National Blue Cross average, and the heavy line way above it is North Carolina. There are only about 5 plans out of some 80 that have a higher rate than ours. We are up near the top of the country in this item.

[Slide.] Now there are three basic principles of insurance that we must recognize. First, the event insured against must be definable and its occur-

rence determinable. Second, the loss indemnified must be measurable or the benefits provided must be specific. That is the reason we've got to have a schedule of benefits at so much per particular feature. It is obvious to anybody that if you had carte blanche to charge the insurance company whatever you wished for a particular procedure when you wouldn't think of charging the patient that, because he would very quickly be bankrupt, the hospitals were guilty of the same sort of thing in that they are able to charge Blue Cross pretty much what they want for the extras, and that is one of the points that is disturbing the insurance problem in North Carolina.

Third, the presence of the insurance must not appreciably increase the occurrence of the event insured against, and that is the big loophole, and I will show you some further facts on that account that will show this up.

[Slide.] For the country at large, the general hospital admission rate—this is per hundred, so it would be ten times this to compare with the other chart—for all families is 12; for those who have insurance it is 13; for those not insured, it is 10. In the well-to-do families, \$7,500 income or over, there is little difference. Actually, the ones with insurance went to the hospital a little less than the average and a little less than those who did not have insurance. But as you get to the lower income groups, there is an increasing disproportion, and those who have insurance use the insurance much more than those who don't.

Then we get down to this low income group of \$2,000 that we have been concerned about all the time, and we find in this group, that we have an average of 12, but for those who have insurance is 19, for those without insurance it is 9.

Gentlemen, we can't at expanded rates take over the welfare and the indigent patients who have this experience without insurance and convert them to this insurance when the rates are based on such incidence.

At the bottom here, I would like to call your attention also to the fact that in the rural, non-farm families, it runs pretty much like the ones above, a slight increase for those who have insurance above the average, and above the ones that don't; but in the rural farm families, the disproportion is almost the same as up here, 17-9. And again the rural farm population is a very difficult group to insure at standard rates because the experience is much worse.

[Slide.] On the basis of the number of hospital days per hundred persons per year, the same sort of pattern stands out. Among the well-to-do, there is no difference, but in the others there is a very significant difference. Those with insurance use it 50% or even twice as much as those without.

[Slide.] Surgical procedures—You surgeons certainly ought to persuade your patients to buy insurance, because on the average those who have insurance have 7 procedures per hundred persons per year and those who don't have four. Breaking it down by category, it goes up to the well-to-do as well as the others, and it is pretty near two to one all the way through.

[Slide.] There are two ways to look at hospital use. First, is the number of admissions per hundred persons, and this is a chart that shows you the difference between the sexes. There is an increase in the incidence of admissions in early childhood, but they are of short duration and don't amount to much. This is the female line, and much of this hump would be eliminated if you excluded obstetrics, and if you do like some of the insurance companies, and excluded all diseases not common to both sexes; that way you would bring your liability down to

this line. I call your attention to this rise here as you hit 65, and I will show you why it goes up.

[Slide.] This is the same sort of data on the basis of days in the hospital. Here in early life and over to this point, the experience is good, but look what happens as you pass 40 and come on up to 65 and it goes on up later.

Blue Cross started with the definite idea that they would set a level of premium here that would be ample to take care of the older claims and adequate to set up a reserve to look after the older people in old age at the same rate. But commercial insurance companies come in and in this particular range in a company where there are 90% male employees, it can give a much more favorable rate for insurance, but they will not take any liability for these older patients as they retire or leave the place of employment. This is one of the problems that Blue Cross has got to face, and what the answer is, I don't know.

[Slide.] Older persons do not have more sickness than the young adults, but the average duration is much longer. For disabilities lasting one day or longer, age 40, 55 and 70—the difference is not remarkable—33, 34, 35. But for disabilities, lasting 30 days or longer, 6, 8, 15, and the average duration of these longer disabilities 1-1/2, 2-1/2, 5-1/2 months.

[Slide.] This is based again on a group of older people who have insurance which allowed them 28 days in the hospital. The annual days of covered hospital confinement per person insured, including maternity. In the younger age groups, these are the actual figures,—but this is an index number that is easier to compare. With the 35 group, with the 100 index, 137, 191, 282, and up here beyond 75, 364. Remember, these people are the ones that would have need for more than 28 days, and they had to leave the hospital a little soon because the insurance ran out on them. There was not much of that here.

But the average days of illness for these patients does neglect that difference, and look at the difference here—100, 142, 250, 342, 600.

[Slide.] Considering all the evidence at hand, it seems reasonable to assume that the amount of hospitalization per capita of the age group 65 and over is roughly four times that of the younger age group, while physicians' services may be approximately doubled. Thus, in 1952, 8% of the population would require 26% hospital facilities and 15% of physicians' services. And don't forget that this 8% of over 65 is steadily rising and in the next decade is going to be much higher.

[Slide.] When you start operating insurance programs, per different values, that it, with different benefits, you will find that the better the benefits offered, the higher the incidence of admission, the cost of the extras, or ancillaries, the length of stay, and the cost of the insurance. These are figures from Hospital Saving.

The 5K program is a rather simple policy that pays so much, \$5.00 towards the bed and a limited amount towards the extras. It sells for less than \$5.00 to the family in a group. It pays approximately 67% of the total hospital bill.

On the basis of a thousand participants and the number of hospital days per year that they collectively use, their experience is 858 days of hospital care that has to be paid for under this program.

The 6G program is one that pays all the extras, and in this case allows \$6.00 towards the bed. The figure goes up to 1936.

The 10G allows \$10.00 towards the bed, and the figure goes up to \$1084. The average of all the Blue Cross policies sold by Hospital Saving last year, averaged 948. And we come along with the

Doctors' Plan giving free medical benefits on top of the surgical indemnity on top of hospital coverage and look what we do with our initial Doctors' Plan: 1,406,—48% more than the average.

[Slide.] This is a break-down of the claims of our Doctors' Plan. This is compared with the Hospital Saving average. These again are the hospital days per year per thousand patients. I call your attention to the last few columns.

For all the certificates sold by the Blue Cross Hospital Saving, 456. For our M Rider, which makes our present Doctors' Plan 50% more—684. Surgical benefits involve sufficient risk and discomfort to act as deterrents. Medical benefits attract far more abuse unless abuse is deterred by adequate co-insurance.

[Slide.] Complete coverage violates the insurance principle and is insupportably expensive. With no limit on the amount of medical service on the contract, members inevitably can make excessive demands on physicians and hospitals, calling for kinds and amounts of service which cannot be paid for if the plans are to keep their costs at a reasonable level. Complete coverage is the very feature of Government-controlled medicine that tends to plunge it into bankruptcy. It is the major expense of a serious illness or accident, and that essentially is hospitalized illness, that is most likely to upset the family budget and where we feel that insurance is most important.

[Slide.] Now let's get to the North Carolina problem in a little more detail. In 1944, we had 8,400 beds; in 1954, there were 13,000 beds, 5,000 more, that we want insurance to pay.

[Slide.] In 1951, 16% of the people in North Carolina were covered by Blue Cross, compared to a 27% level in the whole country. At the same time in North Carolina 21% were covered by commercial insurance.

[Slide.] 80% of families with health insurance obtained it through their place of work or through an employed group. That is a national survey, and it is also our experience in North Carolina. North Carolina is very rapidly becoming industrialized. I heard Dr. Hamilton from Raleigh the other day make a statement to this effect; that 25 years ago—he might have said 40 years ago—75% of the people of North Carolina were rural residents, and that at the present time it is now 25% and rapidly shrinking.

Last year, in the first nine months, there were established 184 new or expanded industries providing 13,200 new industrial jobs, most of which would be filled by rural inhabitants.

[Slide.] We must also keep in mind the fact that the hospital expenses come in different categories. Much of the cost of hospital expense could be prorated against the bed. Some of them depend upon the need.

[Slide.] But here on a national average for 1952, with a per capita cost of \$19.74, I want to call your attention to the fact that the pharmacy laboratory and X-ray, which are the extras which we are talking about, constitute about \$3.00 or a relatively small proportion of this total.

[Slide.] Now let's have a little about the income problem with regard to Blue Cross. There are some 80 Blue Cross plans and a good many Blue Shield plans that have no service benefits, but here is a resume of 47 of those plans, which do have service benefits with certain income levels. These are the family income levels. As you recall, under our plan, we have a limit of \$3,600 on the family income. The average is \$4,200, and the mean is \$4,300. Our plan would come in this group here.

I might also add that on the West Coast, in answer to the competition of such plans as Per-

manente, there are 9 plans with service benefits, with no income level whatever. Anybody can buy it, and the doctors have agreed to give them service benefits.

[Slide.] The Kiplinger Report a year ago brings some interesting information about incomes. Since 1945, the median per capita income has risen from \$2,300 to \$3,800. We started talking about the Doctors' Plan in 1947, and this is one of the things that has so upset our original plans and makes it obvious that we have missed what some people thought we set out to do. Those with incomes below \$3,000 have diminished. Those above \$5,000 have increased; and those between \$3,000 and \$5,000 have remained constant.

As one example of a typical family unit, a married couple with two children, they point out that 79% of the incomes are less than \$6,000 and 45% of incomes are less than \$4,000. One out of every four wives holds a job. Only 15% of wives who have children work, and the majority of these work only part time.

The median income in the South for married women is \$3,400 and for working wives \$650, making a total of \$4,050.00.

[Slide.] So we come up with the Doctors' Plan for the low income group. As you know, we have the co-insurance which materially reduces the price. For the individual without co-insurance, this is the \$8.00 or ward rate, the \$10.00 or semi-private accommodation is somewhat higher, about \$5.00 higher here, and about \$14.00 here. But these are group rates, \$42.00 a year for the individual, \$114 for the family. With the co-insurance, it is materially less, namely, \$97.87, with the \$25.50 deductible. On the direct rates, they are roughly, 20% higher than that. I put this in simply for information as to what the rate is calculated, but it is not being sold. They are selling the \$25.00 and \$50.00 deductible, and this is proving to be the best experience that they have of any of their certificates. This is holding up well, but rates still are \$128.00 and \$115.00.

[Slide.] Now what is the wage situation in North Carolina? This is a survey of the major cities. With our income limits of \$2,400 for the individual, the guy who washes your car in the garage wouldn't get service benefits under our program. If the fellow is married the line stops here. We are excluding a number of people here that would be in a better position to buy the certificate.

[Slide.] The same sort of data from the female standpoint—\$2,400, and not a single one of them would get service benefits. With the \$3,600 married income, probably all of them would be entitled to it if the husband was not getting additional income.

[Slide.] On a national basis, this is one survey—Civil Service is not considered high paid. 2.4% of them are paid less than \$2,500, so probably most of them might get service benefits if unmarried.

Our income is \$3,600 for the family, so about 40% of these people perhaps might be eligible for service benefits. We are missing a tremendous bracket of people here who need this sort of protection.

[Slide.] If all medical expense amounts to about 4% of income on the average and half of it is due to hospital expense, then it would be logical to say that you should invest 2% of your take home pay in good insurance, if it will take care of your hospital expense including professional benefits. Now, on these income limits, the fellows with the \$2,000 income could feasibly put \$40.00 in insurance. He could get that 5K, stretching it a little bit, for about \$47, but it would only pay 67% of his hospital coverage. It wouldn't pay anything for surgery or professional care.

With the \$3,000 level, \$60.00. Incidentally, the hospital certificate of our policy alone, the 8D, is \$66.00, the 10D, is about \$78.00, without any professional benefits. We are in the position of offering a program at over \$100.00, to these people here, saying: "We will give you service benefits, but you people down here that really want it and can buy it you can't possible have it, at least you can't have service benefits."

What the Committee had in mind was this: most of this money goes in for hospital care. There is no need to change the hospital certificate. We can increase the professional benefits approximately 33-1/3%, perhaps 40% at an additional charge of \$1.00 per month per family. In other words, next year we want you to have thought this thing out and made up your own mind about it, but if we will do what Michigan and many of the other states have done to meet this inflationary problem, establish a companion certificate for higher income groups, continue to sell this one to lower income groups, but raise the family income, say, to \$6,000, increase the professional benefits, 30% or 40%, then we could market that program at about \$12.00 more than these figures. These are without the co-insurance, and it would bring it down in the bracket where these people can afford to buy and will want to buy, but they are afraid of it now because there is a loophole in it.

[Slide.] This article was sent to you a year ago. Your patients come to you and say, "What kind of insurance can I buy?" I want to run through six of the rules that were suggested.

[Slide.] Don't try to insure against routine or predictable expense, such as routine office visits, dental care, physical examinations, immunization.

[Slide.] Get blanket coverage that will pay off if you have a big medical expense from any cause, not one that pays for polio and small pox and tetanus and hydrophobia and meningitis.

[Slide.] Concentrate on coverage that will reimburse you substantially for expenses. You are probably wasting your money when you buy a small hospital policy that reimburses you about \$3.00 a day to cover an expense that averages \$10.00 or \$15.00, and in North Carolina, as we have said, that is out of date; it is now over \$17.00.

[Slide.] Try to get into a group policy. On the one hand, you get away from the exclusion of pre-existing conditions, and, on the other hand, you get a material saving in rate because there is less book work involved.

[Slide.] Look with favor on being your own insurer.

[Slide.] If the event insured against is undesirable, it is less apt to happen.

[Slide.] Again figure on paying around 2% or 3% of your take home pay for health insurance.

[Slide.] North Carolina has two or three additional items. This one is true throughout the country, but the problem of the employee leaving his place of work, retiring, and then as he reaches the age of 75, can he continue his protection? With commercial insurance it is very rare but he can do it. With Blue Cross, he usually can.

[Slide.] What percentage of premium collected by this company is returned in the form of benefits to its policyholders? You will be astonished at the wide spread of these figures. According to the last figures that were released in 1953, there were 29 companies in North Carolina that were paying back less than 50¢ on the dollar. I would like to urge each of you individually to write the Commissioner of Insurance at Raleigh and ask him for the Accident and Health Insurance experience for 1954. It is not quite ready, but it will be in another month. You look down that list, and you will be surprised to

see that the first five companies according to volume of business—and those five sell 50% of the Health Insurance in North Carolina—one of them is only returning 23% of the money they are collecting in the form of benefits, and there are a lot of them that are worse than that. There is one that got by two years ago with 4%. That is pretty good business.

[Slide.] This insurance company customarily refused coverage renewal at the first sign of a potentially expensive disease. The companies claim to keep figures on this and they tell the Insurance Committee that "there is only 1/10 of 1% of ours that we do that with." But the way they get out of it—and you know the companies I mean—is to write the patient when the premium is due, and say, "we will renew this only if you sign this waiver against your ulcer or diabetes" or whatever it is they had the misfortune to get into. They say, "You still pay the same rate, we give you all coverage except anything connected with your diabetes," and the patient says "To heck with you; I will just throw the darn thing in the trash basket where it belongs." Then it becomes a premium that is cancelled through failure of the patient to pay. It isn't cancelled by the Company; it is cancelled by the patient.

On this last point, I have been trying to create some interest on the part of the Hospital Association. There are two things that the public needs to be informed about that would enable them to make a wider choice of insurance. Instead of having the legislature try to fit a straight-jacket on the insurance industry in an effort to get the bad companies and at the same time cripple the good ones, the matter could be handled in the way I am about to suggest.

One is to get the amount of premium returned in the form of benefits, and we have tried to get the Insurance Commissioner to publicize those figures, to collect them a little more accurately, because in these figures that I mentioned he also includes disability insurance which should not be there.

The second point is we are trying to get the Hospital Association and the hospitals to keep a running tabulation of the claims that they send in that are rejected by the Company, and if that material be compiled and with the public being informed on an annual basis that such and such a company is cancelling or refusing to honor 30% or 44% of their alleged claims, with those two bits of information, the public will very quickly take care of what the State Legislature has been trying to do on a legislative level. How about this?

[Applause]

The Speaker: Gentlemen: You have heard this very valuable and authoritative contribution to our knowledge. What is your pleasure?

[A motion that the report be accepted was made and seconded.]

[The motion was put to a vote and carried.]

The Speaker: May I announce that all of the Executive Council are supposed to go immediately to attend a dinner that is being given by the Society for the Commercial and Scientific Exhibitors.

[The meeting recessed at 5:15 o'clock.]

MONDAY EVENING SESSION

May 2nd, 1955

The Session reconvened at 8:00 o'clock, Speaker Murphy presiding.

The Speaker: Gentlemen: we are ready to proceed with some of the routine business.

Now we come to the Committee on Public Relations, of which Dr. Koonce is chairman.

I will tell you what he would say if he were here. In two or three states, they have developed state-wide organization for medical secretaries and women assistants in offices. That seems to be a very worthwhile thing, and it has worked well, I believe, in Michigan and in Oklahoma and yesterday the Executive Council passed a motion instructing the Committee on Public Relations, of which Dr. Koonce is the Chairman, and the Department of Public Relations, with Mr. Hilliard being the Director, to take steps to sponsor the organization in North Carolina of an organization of Medical Secretaries and assistants. Dr. Owens says that that will include medical receptionists as well. Of course, the idea is to have some organized channel through which the ladies that work for us in our offices, our secretaries, our nurses, stenographers, and so forth, would be brought together in some organization that would give them a feeling of belonging and a sense of unity and also provide channels through which they would receive some regular literature perhaps. It was the feeling of the Committee on Public Relations that it would be a very worthwhile step in improving the relationship between the profession and the public at the point at which the two first come together. We hope that it will prove worthwhile.

Committee on Public Relations

As usual, the detailed report of the Public Relations Committee, and its component groups, will be made in detail by Mr. Barnes and Mr. Hilliard. However, a few of the high-lights will be listed in this report.

On Tuesday, November 23, 1954, a Medical-Press Panel Discussion Conference was held at the Sir Walter Hotel in Raleigh, in cooperation with the North Carolina Press Association. This conference was considered by the members of the committee to be one of the most valuable acts of the year in Public Relations.

Out of the discussion a few specific suggestions were mutually agreed on by the press and medical representatives. First: that it would be a great help if each County Medical Society would designate an official spokesman, authorized to represent the Society in matters of public information with the Press. Second: that an informal get-together of medical and press representatives at local level for an informal discussion of mutual problems and of sources of press information which would serve as a stepping stone for mutual understanding. With the hope that the out-growth of the above two suggestions would be a local code of cooperation mutually agreed upon by the press and medical profession. At this panel discussion Dean Luxon of the School of Journalism for the University of North Carolina, suggested a possible study of the relationships between the press and the medical profession in North Carolina.

On February 23, 1955, the Public Relations Committee of the State Medical Society approved the participation in this study, and the granting of financial support.

On February 23, 1955 the Public Relations Committee met with Dean Luxon and Professor Carter and the details of such a study were discussed and plans made for the implements of such a study.

The 8th Annual Public Relations Conference of the Medical Society was held at the Sir Walter Hotel in Raleigh, on Wednesday, February 23, 1955. As usual, an excellent program was held, with approximately eighty persons attending. Most of those in attendance were physicians. The only regrets of this conference was that more doctors could not be in attendance.

The High School Essay Contest was held for the period of January 1, 1955, through February 26, 1955. The results of this High School Essay Contest will be announced at the annual meeting of the Medical Society in May.

A Medical Society State Fair Exhibit was sponsored again by the Public Relations Committee during the State Fair in Raleigh. On September 29, 1954, the Seventh Annual Rural Health Conference was held at the Sir Walter Hotel with the cooperation of Public Relations Committee, sponsored by the Rural Health Committee. The Public Relations Committee cooperated by handling the publicity for this occasion, and supporting the efforts for other aspects of the program.

The Public Relations Bulletin was continued on a monthly basis, and it is believed that it is slowly gaining in readers.

A County Public Relations Manual Guide Book of suggested Public Relations Programs for medical societies was distributed to the principal county medical societies during the first four months of 1955—in personal contact by representatives of the Committee on Public Relations. These manuals were published by the A.M.A. for this specific purpose.

There was an open forum held before the Rotary Club in Wilson on February 14th of 1955 by the county medical society as a prelude to later on holding an open forum before the entire community. This was thought to be a very ambitious project on the part of the doctors of that group, which is certainly thought to be a very worthwhile one.

The Chairman of the Public Relations Committee, Mr. Hilliard, and Mr. Barnes, all three attended the Public Relations Conference of the American Medical Association in Miami, Florida in December, 1954.

Donald B. Koonce, M.D., Chairman
Wilmington
Amos N. Johnson, M.D., Garland
John S. Rhodes, M.D., Raleigh

Would some one care to make a motion that we accept that report?

[Upon motion regularly made and seconded it was voted that the report be accepted.]

Physicians Committee On Nursing

Currently this Committee considers the following matters of special interest to the delegates and members of this Society:

1—Legislation. A bill which affects practical nursing has been introduced to eliminate the provision that a person may be licensed by examination for practical nurse after having "had 24 months of actual experience in practical nursing, such period of service and competency as a practical nurse to be certified by two physicians or by one physician and one registered nurse, licensed to practice in the State of North Carolina."

This change is advisable because too many who are not qualified are being licensed through this provision. This Committee approves eliminating the provision and also its elimination has been approved by the North Carolina Hospital Association and the North Carolina State Nurses Association.

The Committee believes that the State Nurses Association is not satisfied with the present nurse practice act and will take steps to amend it as soon as there appears to be reasonable hope for success. We consider the principal goal of the Nurse Association is an all nurse board of nurse registration and nurse education. Another aim appears to be a law requiring mandatory licensure for all persons who nurse for hire. There are probably other perhaps less sought after changes which the Nurse

Association desires. To those above cited we have many objections which are unnecessary to repeat here.

2—A State Joint Commission for the Improvement of the Care of the Patient was considered by the Committee. Such a Commission was asked for by the National Commission which has been functioning for the past six years. It was the consensus of the Committee that as far as nursing is concerned The North Carolina Committee for Nursing and Nurse Education carries on for this State the aims of a state Joint Commission for the Improvement of the Care of the Patient. It is the understanding of the Committee that the North Carolina Hospital Association, the North Carolina State Nurses Association, and the North Carolina League for Nursing also consider unnecessary the organization of a state Joint Commission.

The Health Resources Advisory Committee of the Office of Defense Mobilization suggests that in each hospital a joint commission representing the medical, nursing, and administrative staffs could make an effective contribution to the solution of many knotty problems. The matter of establishing such a commission in each hospital in North Carolina would be the joint responsibility of the Physicians Committee on Nursing and the Committee on Hospital and Professional Relationship. The Committee on Nursing believes that it would be a worthwhile undertaking.

3—The North Carolina Committee for Nursing and Nursing Education is the new name for the old Continuing Committee on Nursing and Nursing Education. New constitution and by-laws have been adopted by this autonomous committee which was originally organized under the sponsorship of the Medical Care Commission. On this Committee the State Medical Society, North Carolina Hospital Association and North Carolina State Nurses Association are represented along with about seven other state organizations including educators, industry and the press. This Committee meets four times a year and deserves recognition as an important force for the improvement of nursing in North Carolina.

4—The Physicians Committee on Nursing is recognized as being an important committee of the Medical Society. In view of the many changes taking place in Nurse Education and Nursing Service, experimental and otherwise, it would be wise to enlarge the Committee to seven members including a chairman. Included in the Committee should be men who have had years in the study of and in contact with these matters.

In conclusion, the Committee on Nursing will not undertake herewith to give statistics on the number of nurses of various categories as these matters will be presented by our representatives on the State Board of Nurse Registration and Nurse Education.

Harry L. Brockman, M.D., Chairman
High Point

William D. James, Jr., M.D.,
Hamlet

Harry L. Johnson, M.D., Elkin
Moir S. Martin, M.D., Mt. Airy

Vernon H. Youngblood, M.D.,
Concord

W. R. Berryhill, M.D., Chapel Hill

David T. Smith, M.D., Durham

Dr. Brockmann: I would like to make a motion to the effect that the House of Delegates endorse the Practical Nurse Bill now before the State Legislature and that the individual members be re-

requested to speak to their Senators about it?

[The motion was seconded.]

[The motion was put to a vote, and carried.]

The Speaker: I go back to the report of the Committee on Industrial Commission of which William F. Hollister is Chairman.

Committee to Work with the North Carolina Industrial Commission

The Committee to Work with the N. C. Industrial Commission had one meeting with the Industrial Commission, that being held on July 29, 1954. A second meeting has been called for Thursday, April 21, 1955.

Our relationships with the Industrial Commission have been quite satisfactory and our problems have been reduced to a minimum by the close relationship between the Medical Society and the Industrial Commission.

During the past year Mr. J. Frank Huskins, who was chairman of the N. C. Industrial Commission, resigned to assume the position of Special Judge to the Superior Court and has been replaced by Mr. J. W. Bean, who has been with the Commission for a number of years. Associated with Mr. Bean are Mr. Frank H. Gibbs and Mr. N. F. Ransdell, Commissioners. We have not yet had an opportunity to meet with the new Commission but are looking forward to this on April 21st.

During the past year there have been many less direct complaints from physicians and very few problems have arisen which required the joint attention of our Committee and the Industrial Commission. I believe this is a healthy trend and reflects the close cooperation of these two bodies during the past five years.

William F. Hollister, M.D.,
Chairman, Pinehurst
G. Westbrook Murphy, M.D.,
Asheville
Guy L. Odom, M.D., Durham
R. B. Raney, M.D., Chapel Hill
Charles T. Wilkinson, M.D.,
Wake Forest
Harry W. Winkler, M.D., Charlotte

Dr. Hollister, do you yourself have anything that you want to add?

Dr. Wm. F. Hollister: I don't, Dr. Murphy. Dr. Lawrence has a message to give.

The Speaker: Dr. Hollister has invited Dr. Ben Lawrence, of Raleigh, who is the Medical Advisor of the Industrial Commission, to give us some information which I am sure we will receive with pleasure.

Dr. Lawrence: Mr. Speaker, Mr. President, and Members of the House of Delegates: I have the honor and the privilege of bringing to this House of Delegates what I believe is a very warm, very sincere and very genuine message from the Chairman of the Industrial Commission of the State of North Carolina. I need not review for you the feeling that has existed in years gone by between many members of my profession and the Industrial Commission. As to the relationship between the two, I want to make an honest confession, for, as many of you already know, I shared the same feeling that you had.

On last Thursday, the Chairman of the Industrial Commission called me to his office and suggested that he would like to send a message in a spirit of good will to this House of Delegates and through it to the North Carolina State Medical Society. I assure you that it was unsolicited on my part, and, insofar as I know, it was unsolicited on the part of the North Carolina State Medical So-

ciety. I had no knowledge of nor did I even know he had entertained such an idea.

He said substantially this: "Dr. Lawrence, I know that you are going to the meeting of the North Carolina State Medical Society on Monday, and I would like you to understand that you are authorized to speak for me and the members of this Commission with reference to matters that may come up or be discussed. I would like especially for you to take a message of good will and a spirit of real brotherly love to that House of Delegates and to the Members of the State Medical Society. Please state to them for us, that whereas, under the statute passed by the Legislature it becomes our duty to institute certain regulatory measures, this duty is not always pleasant to us. We are doing the very best we can with these difficult problems, and please say to them that we have the highest regard for the members of the North Carolina Medical Society, that we covet their good will and cooperation, and we want to cooperate with them." I thank you! [Applause.]

The Speaker: Having served on that Committee myself for many years, I would like to say that the present Chairman of the North Carolina Industrial Commission, in my opinion, is a very fine, reasonable gentleman. I hope and believe that we may look forward to better things. Dr. Hollister thought it would be worthwhile for that information by Dr. Lawrence to be brought to you. Do I hear a motion as to its disposition?

[Upon motion regularly made and seconded, it was voted that the report be received.]

The Speaker: The next item is the Report of the Committee on Advisory Medical Care Commission, Dr. H. L. Brockmann, Chairman.

Advisory Committee to the North Carolina Medical Care Commission

During the 1955 session of the State Legislature this Committee offered its services to the Medical Care Commission through its Executive Secretary, Dr. John A. Ferrell. A matter of concern to the Commission was failure of the Advisory Budget Commission to provide the funds required—\$28,898,000—for the state-wide survey of the existing facilities and needs of new construction of Diagnostic and Treatment Centers, Chronic Disease Facilities, Nursing Homes, and Rehabilitation Facilities. The required survey work must be completed and the Commission's present State Plan amended before the Federal authorities will make any part of an expected appropriation of \$5,868,752.00 available to North Carolina.

On behalf of the Commission members of this Committee have urged several legislatures and senators on the Joint Appropriations Committee to provide the essential \$28,898.00 for this survey.

Harry L. Brockman, M.D.,
Chairman
High Point
James M. Alexander, M.D.,
Charlotte
William R. Floyd, M.D., Concord
Frederic C. Hubbard, M.D.,
N. Wilkesboro
J. W. Roy Norton, M.D., Raleigh

Dr. Brockmann: I think it might be of interest to the delegates to know that an appropriation has been made by the Federal Government for the establishing of (patient) Nursing Homes, and of Hospitals for Chronic Diseases and Rehabilitation. It is somewhat on the order of the Hill-Burton proposition. My understanding of it is that we need to make a survey in North Carolina as to the need for these institutions, and that the Medical Care

Commission has asked the Legislature for an appropriation of about \$28,000 with which to make this survey. If it is found through the survey that this is needed, and taking into consideration whether or not they will compete with private practice, if it is advisable, we should, in 1957, ask the Legislature for an appropriation to match the federal funds to establish these institutions. It means a matter of several million dollars, and I should think the survey, which would take about \$28,000, would be well worthwhile. We have cooperated with the Medical Care Commission, interviewing legislators to get the appropriation of \$28,000 with which to take the survey.

[Upon motion regularly made and seconded, it was voted to receive the report.]

The Speaker: The report of the Committee on Rural Health and Education, Dr. F. C. Hubbard, Chairman.

Committee on Rural Health and Education

Several of the items upon which I wish to report this morning were included in a previous report to you on September 26th. Several of these objectives have been carried out or else are underway. Among these which are underway are (1) contact of local medical societies, agricultural and other local groups by a Rural Health Committee Consultant; (2) medical liaison consultative services with the Farm Bureau, Grange, Home Demonstration Clubs, 4-H Clubs, Ruritan, etc.; (3) Cooperation in connection with the Community Physician Placement problem; (4) Appointment of Rural Health Chairman in each local medical society; (5) Planning and carrying out the 7th Annual Rural Health Conference in Raleigh on September 29th; (6) Preparation of the leaflet **CHECK YOUR HEALTH**, and distribution to the local Home Demonstration Clubs; (7) Close cooperation with the 4-H leaders and members with the sponsorship of the State winner in the health contest to the National 4-H Club Congress. Also subscription to **TODAY'S HEALTH** to the county health winners. Finally, invitations to the county winners, boys and girls, in 4-H health projects to meet with local medical society groups and discuss their work. This has been accomplished in a large part.

Since my report to you in September, the request for two Regional Conferences, one in the East and one in the West have developed. The request for these Regional Conferences came from the Advisory Committee. This, to me, indicates increased interest in these organized groups in the growing rural health program.

Accordingly, planning committees met, one in Asheville and one in Greenville, N. C., recently. At each of these meetings a program was discussed, place of meeting, time of meeting, etc. Program committees, publicity committees, arrangements committees, etc., were appointed. The programs, times and places of the meetings have been arranged, and very satisfactorily. The plan has met with great enthusiasm and, I believe, will be well supported by a good attendance and will stimulate increased interest in our program. These meetings will make possible the attendance of people from the extreme ends of the State who have been unable to attend the regular Annual Conferences in Raleigh. The Annual State Rural Health Conference will be planned as usual. The cost will be minimum and we have already had promises of help with this from the Dental Association and the Farm Bureau. Other local agencies also have offered to bear the expense of printing the programs, etc.

You will no doubt be interested to know that rural health chairmen have been appointed in most of the county medical societies and others

will be appointed until all of them have one, we hope. We feel that this is very important and will stimulate more interest among the local doctors in our program and in improving the health conditions in community health activities. We hope, of course, that these chairmen, as well as other doctors, will provide the leadership which is needed for our work in the different communities. We feel, furthermore, that you gentlemen, as Councilors of your Districts, can be of great help in getting the other appointments made in your Districts, and be of help in other ways in disseminating information necessary in the promotion of our program.

You will be interested to know that the leaflets, **CHECK YOUR HEALTH**, mentioned above, have been prepared and distributed to all the Home Demonstration Clubs in the State, and a copy will be attached to the Public Relations bulletin next issue so that every doctor in the State will have a copy of it. Approximately 20 counties have taken this as one of their study topics this year and the local doctors in these counties will be asked to participate in the training programs. I mentioned 4-H health improvement project in my last report. We can now say that we did send one of the State health winners to the 4-H National Club Congress in Chicago in November. You probably know that one of the 10 national winners for 1954 was from North Carolina. Subscriptions to **TODAY'S HEALTH** magazine have been given to boy and girl county health winners.

The Rural Health Committee has been asked to prepare monthly news articles for the N. C. Farm Bureau Federation Newspaper. Here again is proof that these groups are greatly interested in our program.

The Committee has been active also in the Physician's Placement program in an effort to secure additional medical personnel where needed in rural areas. Our Consultant, Mrs. Boutwell, has made visits to Jones and Polk Counties in the interest of this work.

All together the Committee has been very active. Our Field Representative and Consultant, Mrs. Boutwell, has shown unusual energy, aptitude and adaptability not only in her work but in her contacts with the many different classes of people which she meets.

It is gratifying indeed to note the interest of the members of the Advisory Committee in our work and in the response which the agricultural and other groups made to it. I feel that we are accomplishing a great deal, are doing some good, and probably supplementing in a very important way our public relations program in North Carolina.

Fred C. Hubbard, M.D., Chairman
N. Wilkesboro
Charles I. Harris, Jr., M.D.,
Williamston
William H. Romm, M.D., Moyock
W. Ghio Suiter, M.D., Weldon
Wyan Washburn, M.D.,
Boiling Springs
Rachel D. Davis, M.D., Kinston

Dr. Hubbard: Mr. Speaker, Mr. President and Gentlemen of the House of Delegates: Since our report was written into the record, the Rural Health Committee of your Society has put on two regional Rural Health Conferences. This was done at the suggestion of our President and a group of the chief farm and related organizations, civic organizations, and so on, in our State. The object of these regional conferences was to reach people who had not been able to attend the State Rural Health Conferences.

It was decided to have one conference in the Eastern part of the State and one in the Western

part of North Carolina. The first one was put on at Greenville, N. C., on March 17, and we are greatly indebted to Dr. Walter Humbert, of the Public Health Department of that County, for the assistance which he gave in putting on this conference. Those of us who attended considered it a huge success. There were 222 people in attendance.

The second Rural Health Conference was put on at Asheville for the Western District on March 24. At that meeting, we had an attendance of 230. Great interest was manifested, and I might say that we are greatly indebted in that area to Mr. Morris McGough, of the Western North Carolina Community Development Association, for the assistance he gave me, along with his Planning Committee, in putting over the Conference. We think that it was a great success, and I think that is the general consensus of those who attended.

About 75% of those who attended had not attended previous State Rural Health Conferences. That made us feel, of course, that there was a real need for such a conference in the two ends of the State.

These regional Rural Health Conferences will in no way affect the State Rural Health Conferences. That will be carried out in the late Fall, as per usual.

We feel that this Rural Health Program is one of the most important perhaps of the Society's activities, and we feel that we are fulfilling a long-felt need of the rural people of North Carolina, in conjunction with the other health agencies who are already in the field, particularly the North Carolina State Board of Health. We have tried in every way possible to coordinate the efforts of all the agencies in bringing to a focus the health needs of the rural people, and we have had thorough cooperation on the part of all the groups, particularly the farm groups and the home demonstration groups.

We are greatly indebted to our Rural Health Consultant who came with us last year to replace Miss Charlotte Rickman, Mrs. Annette Boutwell. I believe she is in the hall tonight. In case some of you have not met her—and I am sure some of you have not—I would like to call her to the microphone just for a moment and let her have a word with you.

I would like to say finally that the attendance of the doctors picked up in the Regional Conferences also. That is one of the things we have missed most in the State Conferences. We feel like we have got to have the support of the local doctors in this program in order to make it a success. We feel like it is the duty of the local units to support this program because we feel that in this way the Society is serving a great need and is giving a great service to the country people.

It is my pleasure now to present Mrs. Annette Boutwell, Field Consultant of the Rural Health Committee. [Applause.]

Mrs. Boutwell: Thank you, Dr. Hubbard, and I want to express my appreciation to this group for the fine leadership and guidance given by Dr. Hubbard and other members of the Rural Health Committee in expanding the program this year.

We feel like we have made a start of expanding through our Regional Eastern and Western Conferences, and we are looking forward to reaching even more people next year.

I want especially to thank the County Rural Health Chairmen for the cooperation they have given. Thank you! It has been a wonderful year in North Carolina. [Applause.]

The Speaker: What is your pleasure concerning this supplementary report?

[Upon motion regularly made and seconded the report was received.]

The Speaker: Now, gentlemen, there is one item on our agenda which possibly will lead to some considerable discussion and the Committee that is going to present the matter has suggested that this might be a proper time, and I agree, because we probably have the largest number now that we may expect to have during the evening. Is there any objection to the Chair's varying the agenda and asking for a report of the President's Committee on Membership of which Dr. Street Brewer is the Chairman. Do I have any objection?

Dr. Dixon [Ayden]: You have set here for nine o'clock Organization of the Districts to elect Nominating Committee for next year. My clock says it is about twelve minutes to nine.

Dr. J. F. McGowan [Buncombe County]: I move that we stop the clock.

[The motion was seconded.]

The Speaker: Of course, it is customary to organize the Nominating Committee, but Dr. McGowan has moved that we stop the clock and go into this other matter of the report, with the full knowledge of the fact that it may run somewhat past the hour. Is there any discussion?

[There being no discussion, the motion was put to a vote and carried.]

The Speaker: We will be glad to hear from Dr. Street Brewer.

Dr. Brewer: Some months ago, Dr. Owens appointed a committee consisting of Dr. Paul Whitaker, Dr. Ben Royal, and myself, to make a study of the so-called problem of the Negro physician and membership in medical societies. This, we have done. We have had several meetings, considerable correspondence, telephone messages, and a great deal of thought has been given to the subject, and I might add some prayer, that we might do the right thing.

When we first met, we had three different opinions. As time went on and we considered the matter and discussed and thought about it, our thoughts began to congeal, and finally when they had reached the state that we had an opinion which we could agree on unanimously, Dr. Royal and I handed our notes to Dr. Whitaker and asked him to prepare the report. This he has done. It is now my pleasure to present to you Dr. Whitaker who will read the report of this Committee.

Dr. Paul F. Whitaker: Thank you, Dr. Brewer.

Mr. Speaker, Mr. President, Mr. Secretary, Members of the House of Delegates of our Medical Society, Ladies and Gentlemen:

In submitting the report of the study and recommendations, the Committee desires to make available to the House of Delegates of the Medical Society of the State of North Carolina, all information pertinent to the question involved for their consideration, in order that they may have the benefit of this information in either approving or opposing the recommendations which your Committee is prepared to make in keeping with its study and in the light of the responsibility with which it is charged.

The Committee was appointed by President Owens in late November of 1954. In setting up the Committee, our President followed the mandate of the House of Delegates of this Society, who, under the presidency of Dr. Joseph A. Elliott, directed in May, 1954, that a Committee be appointed by the incoming President to study and make recommendations regarding the question of admitting Negro physicians to membership in the Medical Society of the State of North Carolina.

As soon as the Committee was appointed its members immediately began to inform themselves, assemble available pertinent data, and attempt to clarify their individual thinking on the question

involved. A meeting of the Committee was called in early January, 1955. President Owens attended, and along with the entire membership of the Committee, explored for a period of over four hours the various ramifications of the question. At this meeting the following facts were ascertained:

1. A number of the Medical Societies of southern states had already acted to admit Negro physicians to their membership. The Medical Society of Virginia had taken this action in October, 1954.

2. The action of some of the Medical Societies of southern states had been limited. For example, the State of Mississippi had in effect admitted Negro physicians to scientific membership only, without the right and privilege of paying dues and voting on questions coming before the Society.

3. The Delegates from the Medical Society of the State of North Carolina had been instructed to attempt to get a resolution through the House of Delegates of the American Medical Association admitting members of the Old North State Medical Society to membership in the A.M.A. This Society, as is well known, is composed entirely of North Carolina Negro physicians, and it was felt that if they could be admitted through this society into the A.M.A., it would be desirable, and they would be afforded the privileges of A.M.A. membership. The resolution offered by our Delegates had failed to obtain favorable action by the House of Delegates of the A.M.A. This fact was substantiated for your Committee by the Secretary of the Medical Society of the State of North Carolina, Dr. M. D. Hill, who stated that a number of attempts along this line had resulted in failure.

4. The attorney for the Medical Society of the State of North Carolina had rendered the opinion that the admission of Negro physicians to membership in this Society would be in violation of the constitution and by-laws as presently existing.

5. The Mecklenburg County Medical Society had requested and received a legal opinion contrary to the opinion of the attorney for the Medical Society of the State, and as a result of this opinion, had acted to admit a Negro physician to membership. This raises the question as to whether or not the Mecklenburg County Medical Society by its action has violated the constitution and by-laws of its parent organization.

6. The Guilford County Medical Society has expressed the desire of their membership to admit certain qualified Negro physicians to the Guilford County Society, but when learning that they would be violating the constitution and by-laws of the parent organization, decided not to press the matter until the legal points governing admissions of Negro physicians could be cleared up.

In addition to substantiating the foregoing facts, your Committee in its first meeting discussed many angles of the problem, including the probable disruption of the long existing social mores pertaining in our state. It was finally decided to invite representatives of the Old North State Medical Society (the Negro organization) to meet with your Committee for a discussion of the matter and ascertain their views concerning it. Your President and Committee deemed it advisable to also invite the Chairman and members of the Committee to review the Constitution and By-Laws and the Secretary of the Medical Society of the State of North Carolina to attend this meeting.

This second meeting was held in Kinston, North Carolina, on January 23, 1955. Those attending were: President Owens, Secretary Hill, of the Medical Society of the State of North Carolina, and President Simmons and Doctors Murray Davis and E. V. Davis, representing the Old North State Medical Society. In addition to the officers of the two organizations there were present: Dr. Roscoe

McMillan, Dr. Donnell Cobb, Dr. Wayne Benton, representing the Committee on the Constitution and By-laws, and Dr. Street Brewer, Dr. Ben Royal, and Dr. Paul Whitaker, who constitute the Committee to Study and Make Recommendations on the question of admitting Negro physicians to membership in the Medical Society of the State of North Carolina.

President Owens opened the meeting with a general survey of the situation, and turned the meeting over to Chairman Brewer, who asked the Negroes present for a statement of their views and aspirations. Dr. Simmons, President of the Old North State Medical Society, spoke first, and emphasized the following points:

1. That the major aspiration of the Negro physicians of North Carolina in seeking membership in the Medical Society of the State of North Carolina was scientific advancement as medical men. He emphasized that failure to belong to the county, state, and national medical associations handicapped the Negro physician not only in scientific development by not being able to attend the scientific sessions, but also handicapped the Negro physician in obtaining hospital staff appointments, certification by Specialty Boards and other similar appointments.

2. He touched in general upon certain injustices that the Negro and Negro physician had been called upon to endure over a long period of time, and stated that he felt that we would want our organization to treat fellow physicians as we would want to be treated.

3. He stated that he did not believe that the white physicians of North Carolina would want to handicap a fellow practitioner in his aspiration by reason of his color.

4. He stated that he realized and appreciated the social implications of the question involved, the difficulty of their solution, and that he would not want and he did not believe that the Negro physicians of North Carolina wanted to immediately break down the accepted mores pertaining in North Carolina at the present time.

5. He stated that he believes in time the social implications and difficulties of the problem would be solved, and pleaded for a sane and objective approach to the problem, rather than an approach based on fear of future consequences should favorable action be taken by this Society.

Dr. Simmons was followed by Dr. E. B. Davis, who stated in effect that Dr. Simmons had expressed his own views, and that he was in agreement with the remarks that Dr. Simmons had made.

Dr. Murray Davis, then elaborated on the remarks of Dr. Simmons, and expressed his agreement with them. He emphasized also the handicaps of the Negro physicians, both professionally and socially in our present culture, and in his discussion and through exchange of questions and remarks, made the following points.

1. He stated that he felt that he had the inherent right to attend any type of meeting that he wanted to attend, but that in the light of existing conditions he exercised discretion in what gatherings he attended.

2. He stated that he thought it would be poor judgment, and in fact "almost insane" for himself, or any other Negro physician, to apply under existing conditions for accommodations at the Carolina Hotel in Pinehurst, where the annual scientific and social meetings of the Medical Society of the State of North Carolina are held.

3. He illustrated by quoting a number of happenings of how the Negro physician had exercised discretion and restraint so as not to disturb the present existing social customs.

4. He stated that he believed the majority of Negro physicians wanted to maintain the organization of the Old North State Medical Society, because of the associations and friendships already established and enjoyed in that organization.

Through an exchange of questions and answers regarding the advisability of the Negroes developing a strictly Negro culture within the guaranteed prerogatives of our State and Nation, including the development of pride of race, rather than encouraging joining the white culture. Dr. Davis and Dr. Simmons frankly but respectfully pointed out that there were comparatively few Negroes today with pure African blood and that to the extent that amalgamation of the races existed, that it was due largely to the white race.

5. He stated in effect, as did also Dr. Simmons, that they hoped the white physicians of North Carolina would aid them to obtain scientific recognition and the opportunity for improvement and advancement, and that this was their primary aspiration. They pledged that if Negro physicians were given the privileges of being admitted to membership in the Medical Society of the State of North Carolina, that they and their organization would aid in properly screening Negro physicians who applied for membership on the county level.

6. The spokesmen for the Negro physicians at the meeting, in effect pledged themselves that they would use their influence among members of their race to prevent any attempt to acutely disturb the present social customs pertaining in our state, and to aid in working toward a gradual and evolutionary solution of this admittedly intricate and potentially explosive problem.

After the Negro physicians had spoken and answered questions, there was an equally frank expression of opinion by the members of the two committees representing your Society. This discussion took place largely in the presence of the Negro physicians, and in executive session after they had left the meeting.

The essential points and expressions, many of them originally divergent, were made as follows:

1. One member of the Committee stated very frankly that he did not think the time was right for social equality between members of the Negro and white races; that he did not care to mingle with Negroes socially; that he felt that admitting Negro physicians to the Medical Society of the State of North Carolina would break down the existing social customs, and that while he might be considered prejudiced, that he did not think admitting Negro physicians to membership would be wise.

2. It was pointed out that if Negro physicians were admitted to membership, and any of them attempted to crash the social functions of the Annual Meetings, that they would be deprived of a meeting place, to say nothing of the disruption of the annual social functions that had come to mean so much to the present members of the Medical Society of the State of North Carolina and their wives and guests.

3. It was pointed out that the members of the State of North Carolina enjoyed the friends and associations of their annual sessions in the same way as did the members of the Old North State Medical Association, and would prefer not to have these associations disrupted by all of the implications of the racial question that might result from admitting Negro physicians to membership. At the same time, no one questioned the right or desired to impede the Negro physicians from their aspirations for equal opportunity for scientific advancement or to in any manner stand in the way of individual and collective advancement within the Negro physician's rights as a citizen of the United States, and in keeping with his individual capa-

bilities to achieve the privilege and attainments that he aspired to.

4. The question of equality, justice, freedom, security, social inequities, and human values in general were discussed. The point was made that each individual in the final analysis, had to determine and achieve these values for himself, and that even if they were given to an individual or to a collective society, that they could not be maintained or broadened save through constant struggle, vigilance, growth and increasing maturity by the individual and the society of which the individual is a part.

5. The commendable record of the State of North Carolina in its gradual development of equal opportunity, educational and otherwise, for the Negro was pointed up, and the explosive potentialities of the implementations of the recent Supreme Court Decision in attempting to hasten this healthy, certain, and evolutionary development was questioned.

6. The primitive reactions as witnessed by their acts of members of a race only a few generations removed from the jungle, was also touched upon, and the questions raised as to whether or not many of the Negro race were individually ready and prepared for full responsibility of citizenship in a pressure-ridden culture such as that pertaining in America today. It was readily admitted that there were members of the white race who had enjoyed longer and more helpful exposure to culture than Negroes, who by their actions had shown that they were not mature enough to responsibly exercise certain privileges.

7. It was pointed out to the Negro physicians that members of the Committee from the Medical Society of the State of North Carolina had a feeling for and understanding of the emotional trauma to which a Negro physician was subjected in our present culture, particularly trauma to their personality as human beings as a result of some of the conditions to which they were submitted.

8. One member of the Committee stated that a Negro who, under the handicaps under which he had labored, had demonstrated the ability and tenacity of purpose to obtain his training and license to practice medicine, had as far as he was concerned fully earned his equality, and should be allowed to enjoy the privileges associated with what he had earned.

9. The point was made that both Negro and white physicians of the South had a far greater understanding of the delicacy, difficulty, and potential danger of the practical application of racial relationship than did such organizations as the National Association for the Advancement of Colored People.

10. It was also pointed out that in the opinion of the Committee that the vast majority of the members of the medical profession were believers in the Christian principle of the brotherhood of man under the fatherhood of God, and that to discriminate through their organizations against an individual for reason of his race, is both unfair, unchristian, and unwise.

11. In the opinion of the Committee it was unwise to deny a Negro physician by reason of his color, the place in society which he has achieved through his industry, character, and tenacity of purpose. To so deny him, is in our opinion, not only a violation of Christian ethics, but also a violation of the tenets of true democracy in which we profess to believe.

12. Your Committee, believing that physicians are an enlightened group of men, and so regarded, and generally interested in the general welfare of their community, state, and nation, have certain responsibilities to exercise vision and leadership in the solution of all problems, including the one presently before you.

13. Your Committee believes that time, religion, ethics, mutual consideration of the finer sensibilities of each other as human beings, and increasing individual and collective growth and maturity by both races, will gradually result in a solution of the racial question, including the relationship between white and Negro physicians. It seems to us that a beginning might well be made by the physicians of the two races in an attitude of mutual understanding and tolerance.

14. We believe that the meeting of your Committee with representatives of the Negro physicians has resulted in a mutuality of understanding and feeling not heretofore achieved. As a result of our studies of the problem, we believe it is the earnest desire of the Negro leaders to preserve for the present the social customs now pertaining, and to approach any change in same in a careful and evolutionary manner.

Favorable action by this society would be a tremendous challenge to the Negro medical leaders to strive for an orderly transition.

In the light of the foregoing facts and considerations, your Committee therefore recommends that Section 5 of Chapter 15 of the By-laws be so amended as to add thereto the following:

"Be it further enacted that qualified Negro physicians who are practicing non-sectarian medicine may be admitted (as scientific fellows) to all of the scientific and business assemblies of the Society with the privileges of these particular sessions of the Society."

This, it seems to your Committee, would meet the desires and ambitions for scientific opportunity as medical men as expressed to your Committee by the leaders of the Old North State Medical Society. It would in effect allow them to become members of the A.M.A. with the privileges and opportunities that such membership affords.

Respectfully submitted,
J. Street Brewer, M.D., Chairman
Ben F. Royal, M.D.
Paul F. Whitaker, M.D.

at Pinehurst, N. C.
May 2, 1955.

Now, Members of the House of Delegates, we realize that this is an explosive question, that it is potentially dynamite laden. We realize there will be differences of opinion among this House of Delegates as to the solution of the problem. We realize further that the medical profession as humane leaders are supposed to exercise vision and tolerance about these matters.

Your Committee is making a recommendation. They move that this recommendation be adopted, and they hope that whether you approve the recommendation or throw it out the window, that you will not hastily do so, but will do it after a proper consideration and discussion in the light of the responsibilities with which you are charged.

I think you understand that this has not been an easy task, and it has not been a pleasant task. I am sure that every member of the Committee would rather have had it put on the other fellow. But our answer is, and our hope is, that you will consider it objectively as you consider a medical problem, and, in your maturity of judgment, consider it on an objective basis and as little as possible on an emotional basis. That is what we have tried to do and I tell you frankly we have not been able to do so completely. Thank you!

The Speaker: While the next speaker is coming up, I would like to ask Dr. Royal, the third member of this committee, if he will not come up here and lend us the dignity of his presence.

Dr. Roscoe McMillan: Mr. Speaker, Members of the House of Delegates, I have been coming to this

House of Delegates from the first day of June, 45 years ago, and in that time I have only missed about two meetings, making this about my 43rd time, and I have never in all these 43 years, heard such a masterly presentation on one of the most important subjects that we have to deal with today. [Applause.]

Ladies and Gentlemen, consider this from every angle. Don't be hasty. Give it your concerted thought. Don't let somebody get up here and table this motion tonight until a thorough discussion has been had. Ladies and Gentlemen, it gives me a great deal of pleasure to second the motion by Dr. Paul F. Whitaker. [Applause.]

The Speaker: Dr. McMillan, I ask you this question; As Chairman of the Committee on Constitution and By-Laws, can we assume that your Committee recommends the adoption of this By-Law? The resolution submitted by this Committee was that the By-law be changed.

Dr. McMillan: Mr. Speaker, we have had one meeting of the By-laws Committee, and that was at the same time that this Committee met on the 23rd day of January. We did not have a quorum at that time, and I suggested, as Chairman of the Constitution and By-Laws Committee, that we wait until after tonight and see what the House of Delegates is going to do, but I feel confident that the Constitution and By-Laws Committee will rectify this if this is passed by the House of Delegates tonight.

The Speaker: If passed tonight, it can be voted on again on Wednesday afternoon. It can become effective on Wednesday, if passed on two readings twenty-four hours apart.

Dr. Dixon: Would not our Constitution have to be changed?

The Speaker: To the best of my knowledge, it would not.

The word "white" only appears at one time in the Constitution and By-laws, and that is in the By-laws, not in the Constitution.

Gentlemen, with such maturity and intelligence as we can get, you are welcome now to discuss this matter. We believe that it has been handled in as orthodox and parliamentary a way as possible under the circumstances. The Chair will now welcome your discussions. [Prolonged discussion ensued.]

[There were calls for the question.]

The Speaker: We will put the original motion. All in favor of passing the first motion to approve this proposed change in the By-Laws please say "aye"; those opposed, "no."

Gentlemen, I am sorry; I cannot truthfully say that it is possible for me to distinguish that vote. I am going to ask that all in favor of that motion please stand and be counted by the Constitutional Secretary and the Executive Secretary. Will you remain standing until you are told to sit down? Remember, that only members of the House of Delegates can vote. Please don't sit down until you are told that you have been counted.

[The count was taken.]

The Speaker: Gentlemen, the result of this count shows that 101 have voted for and 34 against. The motion is carried.

Dr. Dixon: How many members are there of this House of Delegates?

The Speaker: Dr. Wingate Johnson, how many voting members do we have?

Mr. Barnes: The question is how many are present tonight.

The Speaker: Dr. Dixon, if you question this ballot, the Chair will certainly entertain a motion that we poll the House.

Dr. Lawrence: May I be permitted one further remark before you attempt that long and tedious

procedure of polling this House of Delegates? I don't believe there is much doubt in anybody's mind that I rather seriously oppose the Committee's report. I do not yield to any man here a superior place in my loyalty to and my love for Ben Royal and my admiration for Dr. Paul Whitaker and Dr. Brewer. They are great doctors. They have rendered a monumental service, in my opinion, and have done their duty as they have seen it. The House of Delegates has spoken by an overwhelming majority of nearly three to one. I would like to ask my friend, Dr. Dixon, if he would not yield a point and instead of asking you to poll this House of Delegates, which is a long and a tedious procedure, and many of us might be rather tired before we got through with it, wouldn't he allow a substitute suggestion, that we move that this House of Delegates make it unanimous if we can. [Applause]

The Speaker: Gentlemen, this may be almost the last official act that I shall perform for the Medical Society of the State of North Carolina, and I would like it to be remembered that this difficult question was considered with absolutely unquestioned fairness to every opinion. Dr. Dixon has raised the question that the vote may not have been accurate.

Dr. Dixon: Mr. Speaker, always in a meeting of this kind we have visitors, and we have a good many tonight, and I thought it possible that some of the visitors might have voted not knowing that they did not have the right to do so. That is the reason I asked how many voting members there were in the House, how many voting members there are recorded as being here. They could have voted one way as well as the other. I am not asking for a poll of the House.

The Speaker: The Chair now has to make a parliamentary decision. Dr. Dixon raised the question, but he did not make a motion. Dr. Lawrence, am I correct in stating that you have moved that the vote be recorded as being unanimous? Is that your motion? Don't let me put words in your mouth.

Dr. Lawrence: You may have inferred that, and perhaps that was in my mind, but if Dr. Dixon is not going to insist on polling the House, couldn't you rule that the vote is overwhelmingly in the affirmative?

The Speaker: I have already done so on the basis of the facts at hand, but certainly it is the privilege of any member to question the validity of that count, and the slightest serious indication that there is a desire to have a polled vote or a written ballot, you may certainly have it. Is there any further comment about this thing?

Dr. McGowan: Mr. Speaker, I move that we make it a unanimous vote.

[The motion was seconded.]

The Speaker: The motion has been seconded, and it is now open for discussion. [Discussion ensued.]

The Speaker: If there is no further discussion, all in favor say "aye"; all opposed say "no." The motion is lost.

The Speaker: Any man here has a perfect right—please do not misunderstand me—to question the validity of that vote, but you must do it in the form of a motion. If you will make a motion that the House be polled and the motion is seconded, the motion will be put, and if it is carried, we will poll the house. That is the only way that I know that we can absolutely preclude the possibility that somebody may have voted in a standing vote who was not entitled to do so. What is your pleasure?

Dr. W. D. Carter [Anson County]: I move that we poll the House.

[The motion was seconded by Dr. Dixon.]

The Speaker: A motion has been made and sec-

onded that a poll vote of the House be conducted. Is there discussion of that motion, or shall I put the question? All in favor of a poll vote of the House please say "aye"; all opposed say "no." The motion to poll the House is lost.

Dr. Dixon: Under parliamentary rule, when a poll of the House is asked for, I believe it has to be taken.

The Speaker: Dr. Roscoe McMillan, you served for a long time as parliamentarian of the Medical Society. Do you agree that when a poll is asked for it must be granted?

Dr. Dixon: You have got an attorney there, Mr. Speaker. Use him.

The Speaker: Dr. Dixon, Mr. Anderson tells me that so far as we know our Constitution and By-Laws does not take up that point, but, so far as proceedings in the State Legislature go, that is the rule, that if there is a demand for a poll it is customary to conduct a poll vote.

Continuing along this thought—and we will try to leave this thing as clean as is humanly possible—unless you all run out on me, and please don't, we will now ask the Secretary to poll the House. It is the decision of the Chair. We will proceed with the poll.

The Secretary is going to poll the House, and he will call the name of each individual delegate. When your name is called, will you please stand up, not say "here," but stand up and say "yes" or "no" so that there will be no question that you are the person he called. We will proceed to poll the House.

I will give this further instruction, that if you approve of this motion you will answer "aye" and if opposed you will answer "no."

Gentlemen, this is the official ballot, conducted in as official a way as I believe it is possible to do: 104 voted for it, and 37 voted against it, and that is almost identically the vote that we started with before.

Will you congregate under your banners and choose the names of members of the Nominating Committee?

May I call one thing to your attention, that all members of the county societies vote in this caucus. It is not limited to delegates in any way whatsoever. All members have a right to vote in the selection of the Nominating Committee.

[The members representing the various councilor districts gathered in groups to select members of the Nominating Committee.]

The Speaker: Gentlemen, will you resume your seats so that we may conclude this session. The House of Delegates will come to order, please. I announce the Nominating Committee as follows:

First District—John A. Payne, III, Sunbury
Second District—C. Fred Irons, Greenville
Third District—Graham B. Barefoot, Wilmington
Fourth District—A. L. Daughtridge, Rocky Mount
Fifth District—Waylon Blue, Sanford
Sixth District—William Goley, Graham
Seventh District—Claude Squires, Charlotte
Eighth District—George Holmes, Winston-Salem
Ninth District—Thomas Thurston, Salisbury
Tenth District—J. B. Anderson, Asheville

I will appoint Dr. Claude Squires as the temporary Chairman of the new Nominating Committee. He is also Chairman of the old Nominating Committee. The Secretary suggests that the new Nominating Committee report to Room 222 immediately and the old Nominating Committee will report five minutes later.

Now, ladies and gentlemen, I am going to read these reports by title in order to get them into the record.

REPORT OF NORTH CAROLINA DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION— JUNE, 1954

The One Hundred third annual meeting of the American Medical Association, House of Delegates, was called to order in the Palace Hotel, San Francisco, California, June 21, 1954, at 10:00 A.M.

One Hundred Eighty Eight of the One Hundred Eighty Nine members of the House of Delegates, representing the Constituent Associations, were present.

The president or a representative of the following associations were presented to the House of Delegates:

President, Dr. E. J. McCormick, American Medical Association

President-Elect, Dr. Walter Martin, American Medical Association

President, American Dental Association

President, American Pharmaceutical Association

President, American Veterinary Association

Assistant Secretary of Defense

President, California State Medical Association

Speaker of House, James R. Reuling, made a short address suggesting improvements for the conducting business of the House.

The House was also addressed by Dr. Edward J. McCormick, our President, and President-Elect, Dr. Walter B. Martin.

The Speaker of the House announced the members of the various Reference Committees, and asked the House to approve them. The Committees were promptly approved by the House.

Dr. B. O. Edwards was elected to serve on the Reference Committee on Reports of Board of Trustees and Secretary.

Drs. M. D. Hill, C. F. Strosnider and B. O. Edwards attended all meetings of the House of Delegates.

The House of Delegates had three long sessions, coupled with two days of Reference Committee meetings, seventy-seven resolutions and many reports, were among the business transactions of the House.

Drs. Hill and Strosnider, appeared before the Reference Committee on Constitution and By-Laws, which committee considered our State Resolution, relative to the American Medical Association admitting The Old North State Medical Society into the American Medical Association. We were graciously received and asked many questions regarding our mutual problems. However, our request was denied on the grounds that it was unconstitutional to have two constituent associations from the same state.

The House of Delegates was informed that of the 17,000 veterans applying for service connected disability, only seven were service connected. On the subject of Veterans Care, The American Medical Association's policy has been, since June 1953, that new legislation would be sought which would limit the medical care and hospitalization benefits to veterans under Veterans Administration, or other hospitals to 1. Veterans with peace-time or war-time service whose disabilities or diseases are service connected or aggravated. 2. Within limit of existing facilities to veterans with war-time service suffering from tuberculosis, psychiatric or neurological disorders of non-service connected origin, who are unable to defray the expenses of necessary hospitalization.

The American Medical Association also advised Congressmen and other government agencies "That the American Medical Association is unequivocally opposed to the establishment of service connection by presumption for disabilities developing after the

termination of military service. It is said that there are neither medical facts, statistics, history or scientific information to support or warrant the enactment of such legislation. It further explained that the current program was an attempt "to control the etiology, pathology, clinical course and outcome of disease in an individual by legislative act."

The House of Delegates asked that the Council on Medical Education and Hospitals study and set up a system of standardization for smaller hospitals in keeping with their general size, personnel and facilities. The House was of the opinion that the smaller hospitals (under 100 beds) were unable to meet the joint commission's requirements, due primarily to a shortage of properly trained personnel and a lack of funds for such personnel when available.

New Principles of Medical Ethics, which affects Billing Procedures, Dispensing of Drugs and Fee Splitting.

These new principles were adopted by the House of Delegates in June, 1954. These changes will be found in Chapter 1—Section 6 of the By-Laws . . . During the past two years Section—6 has been under detail study by the Council on Constitution and By-Laws of the American Medical Association. The report of the Council adopted by the House of Delegates after lengthy discussion in a Reference Committee on Constitution and By-Laws, should be read by every physician.

Section—6 "The ethical physician, engaged in the practice of medicine limits the source of his income received from professional activities to services rendered the patients. Remuneration received for such services should be in the form and amount specifically announced to the patient at the time the service is rendered or in the form of a subsequent statement.

"Unethical methods of inducement to refer patients are devices employed in a system of patronage and reward. They are practiced only by unethical physicians and often utilize deception and coercion. They may consist of the division of a fee collected by one physician ostensibly for services rendered by him and divided with the referring physician or physicians or of receiving the entire fee in alternate cases.

"When patients are referred by one physician to another, it is unethical for either physician to offer or receive any inducement other than the quality of professional services. Included among unethical inducements are split fees, rebates, kickbacks, discounts, loans, favors, and emoluments with or without the knowledge of the patient. Fee splitting violates the patient's trust that his physician will not exploit his dependence upon him and invite physicians to place the desire for profit above the opportunity to render appropriate medical service.

"Billing procedures which tend to induce physicians to split fees are unethical. Combined billing by physicians may jeopardize the doctor-patient relationship by limiting the opportunity for understanding of financial arrangement between the patient and each physician. It may provide opportunity for excessive fees and may interfere with the free choice of consulting, which is contrary to the highest standards of medical care."

A registration of 12,063 physicians and 29,899 guests, making a total of 42,962 attended the San Francisco meeting.

The House of Delegates voted Dr. Wm. Babcock, of Philadelphia, Pa., the Distinguished Service Award for the year 1954, for his outstanding contribution to medicine and humanities.

Osteopathy & Medicine

Four resolutions, dealing with the Osteopathic problem, were considered. The House of Delegates,

accepted a recommendation, made by the Reference Committee, on Medical Education and Hospitals.

1. "That no action be taken on the report at this time, and that final action be deferred until December, 1954.
2. "That the committee be continued until December, 1954, in order to be available to evaluate educational schools of Osteopathy should the House of Delegates of the American Osteopathic Association act favorably upon the recommendation of the Conference Committee.

Foreign Medical Graduates:

Three resolutions and a Board of Trustees Supplementary report were submitted to the House of Delegates regarding the evaluation of Foreign medical school graduates. The Reference Committee on Medical Education and Hospitals, recommended "That the intent and aims of this supplementary report and the three resolutions can best be met by referring the entire problem to the Council on Medical Education and Hospitals for further study and that the Council report at the Interim session in 1954 regarding the problems relative to this report."

The House of Delegates Re-Defines the Doctor's responsibility under the principles of Medical Ethics in the new Section-2 of Chapter 1, of the Principles of Medical Ethics, which reads as follows: Section-2—"The avowed objective of the Profession of medicine is the common good of man-kind. Physicians faithful to the ancient tenets of this profession are ever cognizant of the fact that they are trustees of medical knowledge and skill and that they must dispense the benefits of their special attainment in medicine to all who need them. Physicians dedicate their lives to the alleviation of suffering, to the enhancement and prolongation of life and to the destinies of humanity. They share whatever they have learned and whatever they may discover with their colleagues in every part of the globe, etc."

Miscellaneous:

1. The House voted to continue the holding of the annual clinical meeting.
2. Approve the establishment of a program of Medical Military Scholarships, with appropriate safeguards limiting the number of students involved.
3. Dr. Edward McCormick called upon the Medical profession to take the guess work out of medical cost by adopting an average fee schedule on an area or regional basis. This recommendation was referred to the Reference Committee on Report of Officers, which suggested that the Board of Trustees make a study of such a program where they are already in operation; and, the House approved.
4. Dr. Walter Martin, in his address, declared, "That the most urgent problem before the medical profession is that of financing hospital services to make them more generally accessible—and he closed his address by stating that physicians are duty bound to keep themselves informed of public matters affecting the medical welfare of the people."
5. The House adopted a state resolution, memorializing Dr. Fred Wharton Rankin, of Lexington, Kentucky, who served the American Medical Association as its president in the year 1942. (Dr. Rankin was born in Mooresville, N. C.)
6. Meeting places of the American Medical Association:
1955—Atlantic City, N. J.; 1956 Chicago, Illinois
1957—New York City, N. Y.; 1958 San Francisco, Calif.
7. CLINICAL SESSIONS
1954 Miami, Fla. 1955 Boston, Mass. 1956 Seattle, Wash.

The Date of the Atlantic City (1955) is June 6 to 10, 1955.

8. ELECTION OF OFFICERS

Dr. Elmer Hess, Erie, Pa., President Elect
Dr. Clark Bailey, Vice President, Harlan, Ky.
Dr. George F. Lull, Chicago, Illinois, Secretary
Dr. J. J. Moore, Chicago, Illinois, Treasurer
Dr. James R. Reuling, Bayside, New York, Speaker
Dr. Vincent Askew, Vice-Speaker, Los Angeles, Calif.
Dr. W. B. Alderman, Trustee, Atlantic City, N. J.
Dr. F. J. L. Blassingame, Trustee, Wharton, Texas

These trustees were elected to succeed themselves for a second term; Dr. J. Morrison Hutchinson, Richmond, Va., was named a member of the Judicial Council by Dr. Walter Martin.

Respectfully submitted,

C. F. Strosnider, M.D.)

B. O. Edwards, M. D.) Delegates
M. D. Hill, M.D.)

REPORT OF NORTH CAROLINA DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION—NOVEMBER, 1954

The interim meeting of the American Medical Association, was held in Miami, Florida, November 29 to December 2, 1954, inclusive, in the Ball Room of the McAllister Hotel.

The meeting was called to order by Dr. James Reuling, Speaker of the House, at 10:00 A.M., Monday, November 29, 1954.

The Reference Committee on Credentials reported a quorum present. The Secretary of the Association, called the roll of the House membership, and 190 reported present.

The Recipient of the General Practitioner Award:

Dr. Dwight T. Murray, Chairman of the Board of Trustees, read the qualifications of the winner and then announced that the Board of Trustees had elected our candidate, Dr. Karl B. Pace, Greenville, N. C., to receive the award. Dr. Walter B. Martin, President of the American Medical Association, presented the award. Dr. Pace was given quite an ovation by the House and the visitors present.

Dr. Pace, in his response, enumerated many basic principles of life instilled into him by his mother. Among others, she taught him, "to always be doing something for others". The radio and television people kept Dr. Pace busy following his receiving the award.

The Attendance Was Large:

A total registration of 7,707, of which were 3,253 physicians.

A total of 32 resolutions were introduced in the House, and Speaker James R. Reuling and Vice-Speaker Vincent Askew, were accorded a vote of thanks by the House for their efficient handling of its business. The resolution covered the following subjects: Geriatrics, medical ethics, internships, grievance committees, hospital accreditation, osteopathy, the doctor draft law, subsidized medicine, and professional liability insurance, etc.

Joint American Medical Association and American Legion study of Veterans' problems: Following the suggestion of American Legion Commander, Seaborn Collins, who addressed the House on its opening day, the Board of Trustees appointed a committee to participate in a joint American Medical Association and Legion study of Veterans' Hospitalization.

Dr. Walter B. Martin, President, declared at the opening session of the House, that "Medicine belongs to the people", and that physicians are there-

by "the purveyors of medical care." He also stressed that physicians have an obligation to the people that "goes beyond our own private practice and into the community," and he also emphasized the importance of "continued effort to meet the medical needs of the low-income and other non-insurable groups."

Drs. B. O. Edwards, and M. D. Hill attended all sessions of the House. Dr. C. F. Strosnider served as a member of the Reference Committee on Insurance and Medical Service, to which committee twelve resolutions were referred for study and report back to the House.

Several of the resolutions concerned the Defense Department, the Dependents of the service personnel, and our profession. Our committee after considering all suggestions offered at the hearing, recommended to the House that the dependents of the service personnel, who could not be taken care of by the military medical personnel, be taken care of by the medical profession at the local level and be compensated by the prevailing fees thereat. This recommendation was approved by the House.

The Miami meetings were harmonious and skillfully conducted by the Speaker Dr. James R. Reuling and Vice-Speaker Dr. Vincent Askew.

Respectfully submitted,

C. F. Strosnider, M.D.)

B. O. Edwards, M.D.) Delegates

M. D. Hill, M.D.)

[Adopted]

Committee on Military Service

The Committee on Military Service has had no problem to come before it during the past year. Two members of this Committee are on the Medical Advisory Committee to the Selective Service System and through them the interests of the Society have been observed.

G. W. Paschal, Jr., M.D., Chairman
Raleigh

John P. Bond, M.D., Gastonia

Willard C. Goley, M.D., Graham

J. W. Roy Norton, M.D., Raleigh

Henry Mack Pickard, M.D.,

Wilmington

L. Everett Sawyer, M.D.,

Elizabeth City

Thomas D. Slagle, M.D., Sylva

[Adopted]

Committee on Hospital and Professional Relations

I wish to state that our committee has been in close contact with each other and our counselor, Doctor John Reece, of Morganton, North Carolina.

There has been no specific complaints presented to our committee or to our counselor during the past year. Various minor reports have been discussed with our counselor and myself, but at no time has a major complaint been registered where it was necessary to call together the committee. We consider this very good from both doctors and hospitals standpoint.

Verne H. Blackwelder, M.D.,

Chairman, Lenoir

John Haney Keller, M.D., Ahoskie

Karl B. Pace, M.D., Greenville

W. Walton Kitchin, M.D., Clinton

Arthur L. Daughtridge, M.D.,

Rocky Mt.

Floyd L. Knight, M.D., Sanford

Powell G. Fox, M.D., Raleigh

Claude B. Squires, M.D., Charlotte

Fred M. Patterson, M.D.,

Greensboro

Edward W. Schoenheit, M.D.,

Asheville

[Adopted]

Committee on Anesthesia Mortality

The Anesthesia Study Commission of the Medical Society of the State of North Carolina was organized for the purpose of studying deaths due to anesthesia in the State of North Carolina; establishing causative factors in such deaths and making suggestions which might lead to a reduction in mortality from anesthesia.

The following report covers cases studied from July 1, 1953 through December 31, 1954. The North Carolina State Board of Health forwarded to the Commission death certificates on all patients who died within three days of a surgical operation. From these death certificates cases were selected and questionnaires were sent to the physician concerned. Conclusions were derived from the information obtained from the death certificates and questionnaires.

During a period of 18 months there were reported 719 deaths within three days of a surgical procedure, 408 of these deaths were investigated by questionnaire. Results to date indicate that of these 719 deaths, 96 (13.3%) were attributable entirely or in large part to anesthesia. Of these 96 cases, 55 deaths were undoubtedly due to anesthesia, while in the other 41 cases the patient's disease or the surgical intervention might have contributed to the patient's demise. If any doubt existed, the death was listed as due to a combination of circumstances. Based on an estimated 175,000 patients anesthetized annually in North Carolina, the incidence of death caused by or contributed to by anesthesia is approximately 1 in every 2700 cases.

Anesthesia causes more deaths in North Carolina than poliomyelitis, scarlet fever, tetanus, acute rheumatic fever, appendicitis, or accidental poisoning or shooting. Anesthesia accounts for slightly fewer deaths than does brain tumor, and carcinoma of the lung kills only three times as many. The amount of time and money spent in the prevention of death from some of the above dreaded diseases cannot be estimated, while anesthesia continues to be given and supervised by personnel who are entirely unqualified.

In attempting to extract detailed information from questionnaires, one may become hopelessly entangled. However, there are certain broad categories into which certain of these deaths fall and from which certain conclusions may be drawn.

One might expect that most deaths would occur in the moribund or poor risk case. This has not proved to be true. Of the 96 cases studied, only 31 were considered "poor" risks, 30 of the 96 deaths occurred in "emergency" cases. Half of the anesthetic deaths occurred in patients between the ages of 10 and 50. In 58 (61%) of the 96 cases there was no evidence of cardiac or pulmonary disease prior to operation, while in the group in which death was not attributed to anesthesia, over 50% had some disease of the heart or lungs worthy of note prior to operation. The character and duration of the surgical procedure may have had some relationship to the incidence of death, yet 33 (34%) of deaths occurred in patients anesthetized for either tonsillectomy, correction of squint, obstetrical delivery, appendectomy, or repair of hernia—procedures often considered "minor" in nature and too often entrusted to unskilled anesthetists.

A consideration of anesthetic agents used in these cases yields little information. Most of the deaths occurred when ether was the anesthetic agent employed; but this is of little significance when one considers that ether is the principal agent employed in most hospitals in this State. Deaths occurred in the presence of barbiturates, nitrous oxide, cyclopropane, trichlorethylene, spinal, and local anesthesia.

Of all factors evaluated, one is so outstanding that its significance is indisputable. This factor is that of inadequate attention to the oxygenation of the patient. The sequence of cyanosis followed by respiratory and cardiac arrest is too common. This has occurred during induction, operation, and in the recovery period. In 76 (79.2%) of the deaths reported, some form of respiratory difficulty had been present.

This glaring defect immediately diverts attention from patients, drugs, and anesthetic agents to those responsible for the care of the anesthetized patient. It is axiomatic that anyone attempting to use any form of anesthesia should be prepared to assume the responsibility of breathing for this patient, aspirating gastric contents from the respiratory passages, and supporting circulation. These responsibilities are often delegated to untrained personnel. The surgeon or obstetrician who is legally responsible for the care of the anesthetized patient is usually not in a position to assume these duties and some reports indicate that even if he were, the outcome would not have been different.

It is extremely difficult to place the blame for some of these tragedies on either physicians, anesthesiologists, or hospitals. It is a joint responsibility. In order to lower the death rate from anesthesia, physicians must become more cognizant of the potential hazards incurred and understand more fully methods of resuscitation. The skill of the individual anesthesiologists must be improved and both the responsible physicians and hospitals employing anesthesiologists must insist on adequately trained personnel and equipment for their needs.

Until the physicians of North Carolina become more aware of some of these glaring errors, the Anesthesia Study Commission will continue to collect these cases which in so many instances represent pure ignorance and mismanagement. These findings are presented to the physicians of North Carolina in the hope that they will become alerted to some of these gross errors and assume the lead in taking steps toward their correction.

David A. Davis, M.D., Chairman
Chapel Hill

H. H. Bradshaw, M.D.,
Winston-Salem

Charles M. Cameron, M.D., Raleigh

J. Deryl Hart, M.D., Durham

Joseph S. Hiatt, M.D.,
Southern Pines

Frank R. Lock, M.D., Winston-Salem

John C. Reece, M.D., Morganton

Charles R. Stephen, M.D., Durham

Roscoe L. Wall, M.D.,
Winston-Salem

Nathan A. Womack, M.D.,
Chapel Hill

[Adopted]

Advisory Committee to the Auxiliary

The Auxiliary under the able leadership of its President, Mrs. Powell G. Fox of Raleigh and her co-workers have completed a very successful year. The projects have been as follows:

1. Maintenance of Sanatoria Beds:
 - a. McCain Bed, McCain
 - b. Stevens Bed, Black Mountain
 - c. Cooper Bed, Wilson
2. Contributions to:
 - a. Student Loan Fund
 - b. Endowment Fund for Cooper Bed
 - c. Endowment Fund for Yoder Bed
(McCain and Stevens have been completed)
 - d. Jane Todd Crawford Memorial Fund
 - e. American Medical Education Foundation
3. Sponsor the Doctors' Insurance Program
 - a. Encourage all doctors to join; to procure

literature and display in every way possible.

- b. Educate the public concerning this insurance plan.
4. Sponsor the Rural Health Program in North Carolina
 - a. Continue work of actively promoting the formation of County Health Councils.
 - b. Cooperate with the Medical Society in demonstrations in North Carolina counties. The Rural Health Program is based upon the principle of helping people to help themselves. Our active participation is important in strengthening a program which affects the health of two-thirds of our population.
 - c. Attend the Annual Rural Health Conference which is being sponsored by the Medical Society this year. It meets in Raleigh, Sept. 29, at the Hotel Sir Walter.
5. Encourage every doctor and eligible member of his family to vote.
6. Cooperate with Mr. William Hilliard, Public Relations Director, in his plans for bringing about better understanding among doctors and other groups.
7. Cooperate with Student Nurse Recruitment Campaign
 - a. Urge qualified young women to become Registered Nurses.
 - b. Encourage interested girls to join the "nursing team" by training to become practical nurses.
8. Promote Health Education by:
 - a. Placing Today's Health in school libraries, beauty shops, doctors' and dentists' offices to more widely disseminate, to the public, authentic knowledge on health subjects.
 - b. Furnishing recorded programs on health subjects to local radio stations.
 - c. Sponsoring contests on health subjects.

The title for the 1954-55 essay contest sponsored by the Medical Society is:

"Advantages of Private Medical Care."

- d. Encouraging, in the interest of preventive medicine and early detection, every doctor and each member of his family, as well as lay persons, to have periodic physical examinations.
- e. Sponsoring and encouraging the idea of "A Family Doctor for Every Doctor's Family."
- f. Cooperation with other organizations in health programs.
9. Enlist every doctor's wife in North Carolina as a member of the Auxiliary.
10. Assist our communities in Civil Defense activities
11. Co-operate with the Southern Medical Auxiliary in its three projects:
 - a. Jane Todd Crawford Memorial Fund
 - b. Observance of Doctor's Day—March 30
 - c. Research and Romance of Medicine
12. Try in every way possible to tie in our projects with the 1954-55 work theme, "Leadership in Community Health," of the Woman's Auxiliary to the American Medical Association.

Especially do we commend project No. 2-e, Contributions to American Medical Education Foundation, and No. 7, Cooperate with Student Nurse Recruitment Campaign. These have been emphasized from the Auxiliary and we are sure have been very valuable projects.

The Auxiliary has grown in its strength and in its varied projects to such an extent that it works a tremendous hardship on its President and we feel that some help should be given her throughout the year. We recommend that as soon as feasible some plan should be worked out either for a whole time or certainly a part time Executive Secretary for the Auxiliary.

The Medical Society is indeed proud of the whole hearted cooperation from the Auxiliary and the valuable help it derives from the accomplishments of the Auxiliary.

Roscoe D. McMillan, M.D., Chairman
Red Springs
Milton S. Clark, M.D., Goldsboro
Annie L. Wilkerson, M.D., Raleigh
[Adopted]

Committee on Coroner System

The Committee on the Coroner's System has been continuously active during the past year. Immediately preceding the opening of the General Assembly, the Committee met with all members present. To this meeting were invited representatives of the following statewide organizations:

1. North Carolina Bar Association
2. State Bureau of Investigation
3. State Board of Health
4. Institute of Government
5. Attorney General's Office

The object of this move was to broaden interest in the activities of the Committee on the Coroner's System and to explore the possibility of gaining the active support of its program on the part of groups and organizations other than the medical profession.

As a result of the above meeting, a widely representative Committee was formed under the name of the North Carolina Citizen's Committee on the Coroner's System. The membership of this Committee included all members of the Medical Society's Committee on the Coroner's System and representatives from the following organizations:

1. North Carolina Bar Association
2. State Board of Health
3. State Bureau of Investigation
4. Duke University Legal Aid Clinic
5. Univ. of N. C. Medical School
6. Coronors (3)
7. Press
8. Attorney General's Office
9. Police Association

The Medical Society's Committee on the Coroner's System ceased to operate as such but continued its interests and activities as a part of the N. C. Citizen's Committee proceeding immediately to develop a program for presentation to the General Assembly. Accordingly, an entirely new legislative proposal was prepared a copy of which is attached.* This bill was subsequently placed before the General Assembly and is now before Judiciary #2 Committee of the House as House Bill #147. The bill was sponsored by Mr. Addison Hewlett of Wilmington and Mr. E. K. Powe, Jr., of Durham. Up to this time two hearings have been held. The bill has not yet been reported by the Committee.

The activities of the Committee on the Coroner's System were reported at intervals to the Committee on Legislation of the Society and has continuously received the support of that Committee. A preliminary report to the Council of the Medical Society was made by the Chairman at its January meeting at which time the Council expressed its approval of the actions of the Committee.

A final report of the activities of the Committee on the Coroner's System will be made as soon as the General Assembly takes action on the bill that is before them.

Wiley D. Forbus, M.D., Chairman
Durham
Kenneth M. Brinkhous, M.D.,
Chapel Hill
John C. Reece, M.D., Morganton
John F. Weeks, M.D.,
Elizabeth City
Watson Wharton, M.D., Smithfield
[Adopted]

*See Appendix II at page 378.

Committee on Maternal Welfare

The survey of maternal deaths begun in 1946 by the Committee on Maternal Welfare has continued through the year 1954. The Committee now has approximately 1700 maternal death reports in the files, the majority of which are completed. The first 1000 deaths have been statistically analyzed and considerable data has been obtained. A great deal of the information has been published in the North Carolina Medical Journal. The remainder is being prepared for future presentation.

During the year 1954 there were 148 maternal deaths representing a considerable drop from the previous years, particularly in view of the rising birth rate. There were 86 deaths in the non-white group and 62 in the white group. The primary causes of death are listed below:

Hemorrhage	34
Toxemia	41
Infection	7
Cardiac	3
Embolism	17
Anesthesia	9
Other obstetric	15*
Non-obstetric	20
Indeterminate	2

Total 148

*Other Obstetric

Tuberculosis	2
Pneumonia	2
Transfusion reaction	3
Intestinal Obstruction	1
Cerebral Hemorrhage	1
Not complete to date	6

Total 15

Material taken from the files of the Maternal Welfare Committee was used in a panel on prenatal care before the North Carolina Conference of Social Service in April, 1954; a discussion in the field of Maternal Welfare before the Section on Public Health at the Annual State Meeting in May 1954; Thromboplastic Complications of Pregnancy was given before the Obstetric Section of the North Carolina Medical Society in May, 1954; the Southern Pediatric Seminar in Saluda, in August, 1954; the School of Public Health, Chapel Hill, February, 1955; Robeson and Craven County Medical Societies, in February, 1955; the Southeastern Section Meeting of the North Carolina Public Health Association, in Jacksonville, January, 1955; and in numerous hospital staff meetings throughout the State.

The following articles were published from the same data: "Part IV, Report on First 1000 Maternal Deaths," State Medical Journal, April, 1954; "Opportunities in the Field of Maternal Welfare," State Medical Journal, November, 1954; "Causes of Death in 533 Fatal Cases of Toxemia of Pregnancy," American Journal of Obstetrics and Gynecology, July, 1954; "Acute Toxemia of Pregnancy Associated with Organic Heart Disease," American Journal of Obstetrics and Gynecology, August, 1954; "Indications for the Sterilization of Women," State Medical Journal, January, 1954.

The Committee held two meetings, the first being at Wrightsville Beach in conjunction with the New Hanover County Medical Symposium, August 21, 1954. Five members of the Committee were present in addition to Dr. Owens, Dr. Rousseau, and Mr. Barnes. Report on this meeting has been submitted previously. The second meeting was held in Greensboro, January 23, 1955, with 8 members of the Committee present and 9 guests. Meetings for the next year are scheduled for Wrightsville Beach, August 19, 1955, and early in 1956 at the North Carolina Memorial Hospital, in Chapel Hill.

A breakdown of the anesthetic deaths was presented at the meeting in Greensboro, and a summary of this will be presented in the near future in the State Medical Journal. This report has aroused considerable comment in the State and as with all other information this will be available to members of the Society upon request. As a consequence of this report the Committee requested that a list of anesthetic "Do and don'ts" be prepared and submitted to the Committee. It is hoped that after the Committee has approved this list that many hospitals will be interested in posting such a list in their delivery suites.

The previous radio transcripts are now in the hands of the Television Committee at the University of North Carolina and an effort is being made to adapt them to television in the near future.

During the year the Chairman's activities were changed from the Bowman Gray School of Medicine to the State Board of Health and the question was raised as to whether it would be wise for him to continue in his position as chairman in view of this. The Committee voted unanimously for his continuation and this decision has since been supported by the Executive Council.

Several times in recent years members of the Executive Council has suggested that the budget of the Committee be entirely handled by the North Carolina Medical Society without support from interested institutions such as one of the medical schools, State Board of Health, etc. This policy was adopted by the Committee and the State Medical Society agreed in Executive Council to carry the full support of the Committee. Copy of the budget for 1955 follows:

Salary for Secretary	\$2,040.
Postage	180.
Stationary	150.
IBM	100.
Social Security	30.
Bookkeeping	60.
Miscellaneous	40.
Total	\$2,600.

James F. Donnelly, M.D., Chairman
Winston-Salem
Glenn E. Best, M.D., Clinton
Guy H. Branaman, Jr., M.D., Raleigh
Avon H. Elliot, M.D., Raleigh
Ernest W. Franklin, M.D., Charlotte
Joseph A. Gill, M.D., Elizabeth City
Frank R. Lock, M.D., Winston-Salem
Hugh A. McAllister, M.D., Lumberton
Burnice E. Morgan, M.D., Asheville
George O. Moss, M.D., Rutherfordton
Robert A. Ross, M.D., Chapel Hill
John C. Tayloe, M.D., Washington
[Adopted]

Committee on Veterans Affairs

The Committee has had considerable correspondence and has had one meeting. On that occasion numerous points were discussed in detail, particularly the advisability of changing the intermediary type of program through the Hospital Saving Association. Although this program has proved to be very satisfactory to the Medical Society, the Veterans Administration seemed anxious to change it. Consequently a proposal for this change was submitted by the Chairman of your Committee to the Executive Council meeting in Raleigh in January, 1955. The Council accepted this recommendation but subsequent to that time Mr. Barnes and Dr. Owens have received other advice which would indicate the advisability of maintaining the present

program for at least another year until present changes in the Veterans Administration have had their full effect. It is possible that we will continue with this program even further. Consequently no radical changes are anticipated.

There have been numerous minor crises with the Regional Office of the Veterans Administration, particularly when funds are allocated to other causes than the Home Town Care Program temporarily. There have been some infringements on the program by members of the Medical Society, which in large part have been handled by the Chairman of the Committee by telephone calls or letters to the members of the Medical Society themselves who may not have understood their obligations to the veterans.

Eben Alexander, Jr., M.D., Chairman
Winston-Salem
Vernon L. Andrews, M.D., Mt. Gilead
Everette I. Bugg, Jr., M.D., Durham
Samuel L. Elfmon, M.D., Fayetteville
Robert L. Garrard, M.D., Greensboro
Edwin A. Rasberry, Jr., M.D., Wilson
Vernon W. Taylor, Jr., M.D., Elkin
[Adopted]

Committee on Postgraduate Medical Study

The Committee reviewed the activities and conclusions which have been reported in recent years. These reports commented on the number and variety of offerings in North Carolina in the way of postgraduate programs and indicated the need for the Society to provide more leadership and coordination so that the needs of the physicians of the state might be met even more adequately than at present.

As a first step in this direction and as its major activity of the year the Committee compiled and published a little booklet on Postgraduate Medical Opportunities in North Carolina for 1955 which was distributed to all members of the Society. The programs and activities were listed with the following headings:

- I Grand Rounds and Major Teaching Conferences at the Three Medical Schools
- II Postgraduate Programs in the Three Medical Schools for 1955
- III Meetings, Symposia, Seminars, and Special Lectures

Consideration was given to the inclusion of a list of speakers with subjects for the use of County and District Society program committees but it was not feasible to include this idea in the current publication because of the time and difficulty which would be involved in assembling the list. It is hoped that a beginning can be made on such a list at another year.

The Committee is gratified at the publication in the Journal each month of all the major meetings and postgraduate programs for several months in advance, and believes this is a valuable supplement to its annual booklet.

One subject which received considerable discussion was the possible use of television in postgraduate education and in health education of the public. The new University of North Carolina station affords opportunities in both these fields through open circuit television. The use of closed circuit broadcasts by several organizations has created widespread interest and demonstrated interesting possibilities. Because of the newness of this medium, the many problems involved and the unique opportunities it appears to present, it is our recommendation that a special television committee be appointed to get information and explore the

potentialities. This committee should have specific responsibility for cooperation with WUNC-TV in relation to programs in the health and medical field.

The Committee believes that the publication of the list of postgraduate medical opportunities is just a first step and that further efforts and co-ordination are needed. It urges those concerned with planning the special programs and symposia to make suggestions of ways in which the State Society through our Committee can be of assistance to them in avoiding conflict and duplication with other programs and in maintaining and enhancing the high caliber and wide appeal which these programs have always had.

Finally, our Committee expresses its deep appreciation to Mr. James T. Barnes, Executive Secretary, Mr. William N. Hilliard, Public Relations Representative, and members of the Headquarters Staff for their splendid cooperation and assistance in the publication and distribution of the Committee's booklet.

William P. Richardson, M.D.,
Chairman, Chapel Hill
Wilbert C. Davison, M.D., Durham
Monroe T. Gilmour, M.D., Charlotte
William Louis McLeod, M.D.,
Norwood
Robert L. McMillan, M.D.,
Winston-Salem
[Adopted]

Committee on Vocational Rehabilitation

No complaints have been received by the members of the Committee or the Committee Chairman referable to specific grievances concerning the State Vocational Rehabilitation Program. The 1953 report indicates clearly that the North Carolina Division of Vocational Rehabilitation is working in close cooperation with approved hospitals and the physicians of the state in providing facilities for those patients eligible for Vocational Rehabilitation help.

Federal government Legislation during the latter part of 1954 and early 1955 has provided funds for increased help through Vocational Rehabilitation dependent on additional state matching funds. The provisions for the additional funds are similar to those which have existed in the past. There is no indication of infringement on the doctor-patient relationship.

Federal Funds for aid in establishment of Rehabilitation Centers are now available. These must be used in conjunction with State matching funds and other matching funds. Several organizations throughout the state are interested in construction of and promotion of a Rehabilitation Center for the use of all patients requiring such service. The purpose of such a center would be to supply the eligible patient with necessary concentrated treatment through psychological evaluation, physical therapy, occupational therapy, brace therapy, job re-training after definite medical and surgical treatment have been completed by the patient's physician. There are several centers similar to this throughout the United States and the accumulated evidence indicates that they have a necessary place in helping the injured or handicapped person back to his job. Such a center would provide care at a lower rate than the ordinary general hospital can offer. It would include specific equipment and trained personnel for handling the patients and the equipment. Much information is available from the insurance companies concerning the Rehabilitation Centers that they have established for providing this phase of treatment for compensation patients. Their statistics indicate that there has been a great saving of time and money in the treatment of compensation problems by using the Rehabilitation

Center as an adjunct to private medical and surgical care.

This Committee recommends that the Medical Society support efforts to establish a Rehabilitation Center in the State of North Carolina which would be available to all practicing physicians for referrals of patients requiring specific rehabilitation therapy.

J. Leonard Goldner, M.D., Chairman
Durham
Joshua F. Camblos, M.D., Asheville
Kenneth L. Pickrell, M.D., Durham
Roy B. McKnight, M.D., Charlotte
M. A. Pittman, M.D., Wilson
R. B. Raney, M.D., Chapel Hill
[Adopted]

Committee on Occupational Health

The Committee on Occupational Health has held two meetings this year. The first was held at Chapel Hill in September at which time five members were present, Dr. William Richardson, Dean of the School of continuing education and our able executive secretary, Mr. James T. Barnes.

The second meeting was held on January 24, at the Shoreham Hotel in Washington, D. C. during the sessions of the Congress on Industrial Health. Four members of the Committee were present at that meeting.

It was decided at the Chapel Hill meeting that another symposium on the general subject of industrial health would be held and that members in the field of employment would be invited to participate in the discussions and as many as would to attend. The medical profession, of course, would be invited.

A day and a half program was set up, and leaders in the safety field, together with teachers in the medical schools and industrialists came together and presented an instructive and interesting series of discussions and panels which really would have been helpful to anyone in the field of medicine. There were thirty-five present the first half day besides those who participated in the program, and forty-five for the full day's program on January 14. The committee is grateful to the University and to all of those who participated in the Program, especially Dr. W. P. Richardson.

Largely through the efforts of one member of our Committee, Dr. Norman Boyer, nurses employed in industry have recently formed a state organization. It is hoped that this will result in improved service to people employed in industry and better cooperation and a better understanding between nurses and doctors.

It is a known fact that approximately ninety per cent of the industry in North Carolina falls in the category of small industry, and it is also a well known fact that about the same percentage of industrial health problems rest on the shoulders of the general practitioner. For these two reasons it is felt that our programs should be fitted more to the needs of the general practitioner than to any other one group. A matter of requesting the House of Delegates to establish a separate section in the Society on Occupational Health was discussed but no definite action was taken and no recommendation in that respect is made at this time.

There are two matters of importance so far as the work of the Committee is concerned that need correction: 1. The Committee should be enlarged. 2. The matter of approval of Guiding Principles of Occupational Medicine.

In regard to the matter of membership on the Committee, it is the recommendation of this Committee that the future membership be increased to a total of fifteen physicians with one representative from each of the following specialties: 1.

General Surgery. 2. Internal Medicine. 3. Neurosurgery. 4. Eye, Ear, Nose, and Throat. 5. Dermatology. 6. Orthopedics. 7. Radiology. 8. Psychiatry. 9. Obstetrics, Gynecology. 10. Pathology. 11. A teacher in the Department of Preventative Medicine from one of the medical schools, and that the remaining members be selected, two from each of those doing Industrial Medicine as a specialty and two General Practitioners. That whenever practicable one member of the Committee shall come from each councilor district and that three members be appointed for one year, three for two years, three for three years, three for four years, and three for five years, and thereafter each year three for five years.

It is further recommended that the action approving our version of the Lake County Code of Ethics approved last year by the House of Delegates be rescinded and that, "Guiding Principles of the Occupational Medicine," as proposed by the Council on Industrial Health of the American Medical Association be adopted. A copy of that document follows:

Reprinted from The Journal of the American Medical Association

May 22, 1954, Vol. 155, pp. 364 and 365

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Guiding Principles of Occupational Medicine

The principles below have been approved for publication by the Council on Industrial Health. The material is a revision of the Council's previous publication entitled "Outline of Procedure for Physicians in Industry."

The committee in charge of the revision consists of the following physicians:

E. S. Jones, (Chairman) Hammond, Ind.

Leonard Arling, Minneapolis

Preston N. Barton, Meriden, Conn.

Daniel C. Braun, Pittsburgh

Paul A. Davis, Agron

Lloyd E. Hamlin, Chicago

Allan Harcourt, Indianapolis

A. G. Kammer, Pittsburgh

Clarence D. Shelby, Port Huron, Mich.

C. M. Peterson, M.D., Secretary

The principles of Medical Ethics of the American Medical Association apply to all forms of medical service. This outline has been prepared by the Council on Industrial Health with assistance from the Industrial Medical Association, the committees on industrial health in many state medical associations, and private practitioners as guiding principles for physicians, medical organizations and other interested in occupational medical service and relations.

Definitions and Purpose

Occupational medicine concerns itself with all aspects of health in relation to occupation. Industrial medicine is a component of occupational medicine provided to employed groups by an employer or other third party with a valid interest. The broad purpose of industrial medicine is the promotion of the healthful well-being of employed persons through services provided at the place of employment or at another convenient facility or location. This purpose is served by: (1) prevention of disease and injury through medical supervision of workers, the work place, materials, and processes; (2) constructive measures such as medical examinations, counseling, and health education; and (3) medical and surgical care to restore health and productive capacity as promptly as possible after occupational illness or injury.

Scope of Service

An adequate industrial medical program requires the services of licensed doctors of medicine full time, part time, or on call, depending on size of or-

ganization, location, prevalence of potential dangers in the work environment, and other considerations.

1. **PREVENTION**—The physician should acquaint himself by personal familiarity with all materials and processes used in the work environment over which he exercises medical supervision to the end that he may recommend appropriate protection of employees against conditions actually or potentially harmful.

2. **MEDICAL EXAMINATIONS**.—Medical examinations of employees are designed to permit assignment of work compatible with the physical, mental, and emotional fitness of individuals and to maintain their safe and healthful employment. All examinations should be sufficiently complete as judged by the examining physician to protect the health of all workers and to safeguard the public welfare. The need and extent of further examinations must be determined by the physician in accordance with specific requirements, such as (a) the discovery of occupational disease, (b) the diagnosis of illnesses that may adversely affect the worker, and (c) safe return to work after absence due to sickness or injury. Medical records are confidential and should always be kept in the custody of the medical department.

In accordance with professional judgment, the examining physician may acquaint the examinee with his findings and may take steps to refer all nonoccupational conditions requiring correction to the physician of the worker's choice.

3. HEALTH EDUCATION AND COUNSELING.

—The physician should take advantage of all opportunities for instruction of workers in hygienic living both in and out of the work place. He may properly give advice about health needs and available community facilities for meeting them.

4. MEDICAL AND SURGICAL CARE.—

(a) **Compensable Disability**: Workmen's compensation laws and policies of medical societies usually govern the provision of medical services for occupationally induced injury or illness. A section of the principles of Medical Ethics has direct reference:

"Sec. 4.—Free choice of physician is defined as that degree of freedom in choosing a physician which can be exercised under usual conditions of employment between patients and physicians. The interjection of a third party who has a valid interest, or who intervenes between the physician and the patient does not per se cause a contract to be unethical. A third party has a valid interest when, by law or volition the third party assumes legal responsibility and provides for the cost of medical care and indemnity for occupational disability."

Additional rules of conduct apply:

1. Adequate care of industrial injuries or occupational disease requires that the chosen or appointed physician seek qualified assistance or consultation for all services beyond his ability.

2. An industrial physician shall not, while caring for an industrial injury or disease, urge a patient to have an unrelated concomitant and coincidental disease treated by himself at the worker's expense.

3. When a case is diagnosed as nonoccupational, the patient is to be referred to the physician of his choice.

4. When an employee's personal physician suspects an occupational disease or injury, or when differences of opinion exist as to the compensability of a medical or surgical condition, he should with the employee's consent confer with the plant physician or appropriate company representative.

(b) **Noncompensable Disability**: The treatment of injuries or diseases not occupationally induced is the function of private medical practice. The physician in his industrial relations should abstain

from such services except in the case of (1) absence of accessible independent facilities and (2) minor disorders that temporarily interfere with an employee's comfort or ability to complete a shift, for the relief of which he would not ordinarily seek other medical attention. Established standards of medical practice in the community shall govern case finding and immunization programs in industry.

The physician in industry should employ such measures as an emergency dictates in all cases of urgent sickness during working hours on the working premises until such time as he is relieved of further responsibility by the family physician.

The physician in industry and the employee's personal physician should cooperate in those phases of rehabilitation which progress best under medically approved working conditions.

General Relations

1. **PROFESSIONAL STATUS.**—The physician in charge of an industrial medical service should have position and authority in the industrial organization commensurate with the importance of the duties to be performed and a responsibility for professional acts and policies that will provide adequate safeguards against unethical professional conduct.

2. **THE EMPLOYER.**—The provision of occupational medical services is regarded as a function of management. Agreements between physicians and employers or other third party are contractual. A contract is not unethical per se, but may be if it (a) makes impossible the provisions of adequate or competent medical service; (b) is contrary to sound public policy; (c) evades medical practice acts; or (d) has been developed through advertising, soliciting, underbidding, or similar practices. Written contracts are rarely necessary.

A physician's relation to industry is improved if he does not solicit the appointment. However, it is not regarded as solicitation for a physician (a) to notify a medical or other association of his desire to secure an industrial appointment or (b) to apply for appointment directly or through a recognized placement service as staff physician in an organized industrial medical service or as physician in charge of a plant program without previous or present medical coverage. No physician should replace an industrial medical appointee until the latter has been properly dismissed.

3. **THE EMPLOYEE.**—The health of each person served is the physician's chief concern. He shall provide the same courteous efficient care as he would to a private patient. A physician will not use his industrial affiliation as a means of gaining a private practice amongst plant workers, especially through solicitation, underbidding, or insinuations of reprisal against workers who prefer care by physicians of their own choice for nonoccupational illness. No influence should be brought to bear on employees in their selection of personal physicians.

4. **NURSES.**—Personal medical services involving the establishment of a diagnosis and the definition of treatment or the performance of specific prevention measures are the function of the physician; however, it is desirable for the nurse to participate in such services if she acts under direct medical supervision or under indirect supervision such as is provided by standing orders.

Standing orders are defined as a written compend of directions outlining services and procedures, approved and signed by a licensed physician and acknowledged by him to be services and procedures that may be performed by a certain nurse under certain circumstances. Such orders should not attempt to delegate the exercise of medical discretion but should serve as authorization for

approved routine procedures for common minor conditions and as a directive for emergency care of more serious complicated conditions until the physician's arrival.

The physician should be responsible for the instruction and guidance of all medical personnel. There should be no delegation of services requiring expert medical judgment.

5. **CONSULTANTS.**—Assistance should be obtained from consultants in medicine, surgery, or hygiene or in other technical specialties whenever necessary.

6. **OFFICIAL HEALTH AGENCIES.**—The physician in industry shall consider himself as plant health officer. He should cooperate with bureaus of industrial hygiene in the investigation of hazards and promotion of healthful working conditions, by reporting occupational disease as required, and by accumulating and reporting data on the relation of occupation to disability and mortality.

7. **WORKMEN'S COMPENSATION AND REHABILITATION AGENCIES.**—Medical and surgical care should aim to restore the disabled workers to his former earning power and occupation as completely as possible and without unnecessary delay. Concise accurate medical reports promptly submitted to those agencies entitled to them are a part of this obligation.

Equitable administration of workmen's compensation in part depends on medical testimony which shall adhere to reasonable scientific deductions regarding the injury or possible sequelae to the end that every deserving claim receive just consideration.

8. **MEDICAL ORGANIZATIONS.**—Physicians in industry should participate in the organizational and educational activities of general and special medical societies and of hospitals, to the end that the objectives and contributions of occupational health may be recognized and available to the medical profession at large.

Specific inquiries on matters relating to occupational health should be directed to the appropriate county or state medical societies or to the Council on Industrial Health, American Medical Association, 535 N. Dearborn Street, Chicago 10, Illinois. (Printed and Published in the U. S. of America)

Harry L. Johnson, M.D., Chairman
Elkin
G. Norman Boyer, M.D.,
Pisgah Forest
Herman Easom, M.D., Wilson
Mac Roy Gasque, M.D.,
Pisgah Forest
John M. Hall, M.D., Elkin
Logan T. Robertson, M.D., Asheville
Richard McC. Talianferro, M.D.,
Greensboro
[Adopted]

Committee on Air-Conditioning Headquarters

The Committee on air-conditioning states that no marked efforts were made in 1954 to establish this needed equipment in Headquarters' office due to limitations which the building management has placed upon them. The installation, which would have required multiple window units further, blocking the natural light afforded which is also limited in this particular building space, was not desirable.

It can be reported now that technical developments are such that a single package unit cooled by air in lieu of circulating water is now possible, it is believed that the building management will permit installation of a satisfactory single package unit, and this is being handled through air-conditioning engineers at the present moment and in view of the authority already granted this Com-

mittee by the Council and House of Delegates we hope that installation will be made in late spring so as to contribute to tolerant working conditions of our employees during the extremely hot season of the year.

Zack D. Owens, M.D., Chairman,
Elizabeth City
J. J. Combs, M.D., Raleigh
G. W. Paschal, Jr., M.D., Raleigh
M. D. Hill, M.D., Raleigh
James T. Barnes, Exec. Secretary,
Raleigh
[Adopted]

Committee on Tuberculosis

Our Tuberculosis Committee has not had a chance to have a formal meeting, but I believe we can report that there has been more progress made in the control of tuberculosis in North Carolina in the last several years than ever before. The death rate has fallen off dramatically due to the effective use of the anti-tuberculosis drugs and we are much closer to the time that there will no longer be a waiting list of any type tuberculosis patient at the State Sanatorio. From the Public Health standpoint this will be a very significant day.

We are aware of the move that has been pushed by the Tuberculosis Association to get routine general hospital admission x-rays and agree it would be an excellent thing. The committee recommends to the State Medical Society that it go on record as approving such a procedure.

M. D. Bonner, M.D., Chairman,
Jamestown
H. L. Seay, M.D., Huntersville
Charles D. Thomas, M.D.,
Black Mountain
[Received as information]

Committee on Scientific Awards

Three Scientific Awards are now being presented annually to Fellows of the State Medical Society in recognition of outstanding merit in presentation in one form or another of scientific material. The judging of one of these Awards that of audio-visual media—must necessarily be done at the previous Annual Meeting, since this material consists of motion pictures and scientific exhibits. Hence, the work of the Committee has become increasingly complicated, and in the previous Annual Report, it was recommended that the Awards Committee be made a standing committee.

The addition of the Gaston County Audio-Visual Award has also created another problem, which did not exist when only manuscripts had to be judged, and which has not, as yet, been satisfactorily solved. To make the selection properly and fairly a minimum of three members of the Committee must be present for the full three days of the meeting, and be available at all times to view motion pictures when shown, as well as to view individually and together the scientific exhibits. Because of commitments to the House of Delegates, or to the other Committees, or to private practice, this has never actually been achieved. At previous meetings, it has always been necessary to substitute for missing Committee members willing volunteers present at the meeting, and not otherwise committed. For the last meeting, in an attempt to eliminate this problem, Mr. James T. Barnes, Executive Secretary of the Society, with the sanction of President Elliott, appointed a sub-committee to supplement or supplant the regular Committee if insufficient members were present to function. The sub-committee members were carefully chosen after interrogation as to their ability and willingness to be present for the full meeting, as well as being uncommitted to any other obligation. Three physicians and two laymen in the medical illustrative field accepted the ap-

pointments as stipulated. In spite of this careful selection of appointees, however, only one physician and one layman of the sub-committee were present, the other layman sending a substitute. Therefore, the Awards Committee, which functioned at the last Society meeting, consisted of Dr. William Doshier, Acting Chairman, Dr. Hershel C. Lennon, Mr. Emory S. Hunt and Mr. George Lynch. This group performed its services faithfully and in a praiseworthy fashion, and the Chairman is grateful to them.

Since the entire personnel of a small three or four man Committee cannot be relied upon to be present, nor can a specially appointed sub-committee be relied upon to be present, even when appointed with the stipulation that they will be present, the problem still remains unsolved. For the current year, another experiment is being made which consists in having the Awards Committee composed of a large group of five members. It is hoped that at least three of them will find themselves able to be present at the meeting and remain for the entire meeting, in order to perform their designated task.

Rowland T. Bellows, M.D., Chairman
Charlotte
Verne S. Caviness, M.D., Raleigh
William S. Doshier, M.D.,
Wilmington
[Adopted]
Jerome O. Williams, M.D., Concord
[Adopted]

Committee to Work with the North Carolina School Health Coordinating Service

Your committee has met several times during the year and has also met with the like committee from the North Carolina Dental Society, Dr. Z. L. Edwards, Sr., Chairman. The question of transferring the \$550,000, earmarked annually to the Department of Public Instruction to be used for School Health Work, has been discussed and it was thought best that since the School Health Work is a health problem primarily, that this work should be under the Department of Health of the State, and that through this agency work with the superintendents of schools in the various cities and counties throughout the state could be handled better with less overhead and less duplication of services. With this idea in view, we met with the committee from the North Carolina Dental Society and also with Mr. John H. Anderson, Jr., the legal representative of the Medical Society of the State of North Carolina. The Dental Committee presented resolutions from the Executive Committee of the North Carolina Dental Society, urging that this transfer of the funds be made, and offering their cooperation toward this end. A copy of the resolution passed by the board was presented to our committee. We realized that it was a ticklish problem to tackle and there would be the possibility of losing the appropriation entirely, but it was thought best to go ahead with it and try to get the transfer if possible. At this writing, it has not been presented to the Legislature as yet but will be during the present session. After this is accomplished, then the idea is to meet with the committee from the Dental Society and from the Department of Health and map out a program to carry on this work among the school children so as to get the greatest service for each dollar. There has been considerable dissatisfaction among the medical profession, particularly and to a certain extent among the dental profession, about the way this program has been carried on. It seems that each county has a different rule under which to work, some men receiving very little compensation for their services, and some even none, while others received almost as much as would be charged to a private patient. If

the fund can be transferred to the Department of Health, then it is the purpose of this committee, along with the others from the Dental Society and from the Health Department to work out a program which would be equitable and give the most for the money.

William T. Rainey, M.D., Chairman
Fayetteville
Charles H. Gay, M.D., Charlotte
Amos N. Johnson, M.D., Garland
Paul McBee Abernathy, M.D.,
Burlington
[Adopted]

Committee on Eye Bank Advice

This will advise that the Committee on Eye Bank Advice has no report for the year 1954-1955.

William Banks Anderson, M.D.,
Chairman, Durham
James David Stratton, M.D.,
Charlotte
John D. Wilsey, M.D.,
Winston-Salem
[Adopted]

Committee to Study Care and Control of Chronic Illness

This committee has worked in cooperation with a similar committee from the North Carolina Medical Care Commission. The committee as a whole has met with the committee from the Medical Care Commission, with Dr. Ferrell and others interested in the Care and Control of Chronic Illnesses. The chief function of the committee has been to sponsor legislative bills directed at this program and incidental surveys. The report should and does give full credit to Dr. John A. Ferrell for his help and leadership in the work.

Lenox D. Baker, M.D., Chairman
Durham
Robert H. Barnes, M.D., Durham
J. Street Brewer, M.D., Roseboro
Wm. M. Coppridge, M.D., Durham
Charles W. Stryon, M.D., Raleigh
Joseph B. Stevens, M.D., Greensboro
R. Burke Suitt, M.D., Durham
John L. Winstead, M.D., Greenville
[Adopted]

Student A. M. A. Advisory Committee*

The Advisory Committee to the Student AMA has not been called upon for any action and has not met during the year. It has no report.

Clarence E. Gardner, M.D.,
Chairman, Durham
James B. Bullitt, M.D., Chapel Hill
Bennett B. Poole, M.D.,
Winston-Salem
[Adopted]

*See Appendix I at page 371.

Committee on Medical Society Home and Library

The committee has been alert in regard to possible library developments, but no definite change has been accomplished up to this time. However, we attach a letter from the State Laboratory of Hygiene which is of interest to the State Medical Society in that it makes immediately available to every doctor in the state a very good library and librarian situated in the Laboratory of Hygiene, 214 W. Jones Street, Raleigh, North Carolina.

M. D. Hill, M.D. March 15, 1955
Odd Fellows Building
Raleigh, N. C.

Dear Dr. Hill:

I am enclosing the statement on the Library which you asked me to send to you. I hope it is about what you wish.

I intended to get this to you immediately after you were here, but Dr. Hamilton said it would be well to mention it to Dr. Norton, which caused the delay.

I need not tell you that all of us appreciate your fine cooperation in this matter.

With best wishes, I am

Sincerely yours,
John M. Gibson, Librarian

The State Board of Health invites the doctors of North Carolina to avail themselves of the facilities of the new Medical and Public Health Library. The Library was made possible by a grant from the Zachary Smith Reynolds Foundation.

It opened with about 4,000 volumes, many of them constituting the private library of Dr. Charles O'H. Laughinhouse, which North Carolina's late State Health Officer generously gave to the State Board of Health. Other friends of public health and the medical profession have made other contributions, and additional volumes are being purchased as funds permit. It is expected that in a short time the Library will contain substantially more authoritative, up-to-date books on all medical and public health subjects.

The Library also has been receiving a number of medical, nursing and public health journals, and bound volumes of earlier issues, going back in some cases a quarter of a century or more, which are available for borrowing and consultation.

The Library's journals, books and other facilities are available to any North Carolina doctor wishing to avail himself of them. The librarian will also be glad to be of whatever assistance he can to those needing help in preparing bibliographies or revising papers. It is sincerely hoped that the Library will prove of great help to the medical profession, as well as public health workers, of the State.

Hugh A. Thompson, M.D., Chairman
Raleigh
William M. Coppridge, M.D.,
Durham
Millard D. Hill, M.D., Raleigh
Ivan M. Procter, M.D., Raleigh
[Adopted]

Liaison Committee, State Service Organization on Veterans'

This Liaison Committee has met each quarter at various locations, the last one being at the North Carolina Baptist Hospital and Bowman Gray School of Medicine in Winston-Salem, North Carolina. Discussions of various problems relating to veterans' affairs have been held with the numerous service organizations and Veterans Administration officials. Although from time to time very little seems to be accomplished, certainly over the last two years a deeper understanding has grown up between the various members of this Liaison Committee, and it is the impression of all concerned that this understanding may lead to a more workable type of arrangement for veterans' affairs in this state. There seems to be a good deal less determination on the part of service organizations to push certain rights for non-service connected cases through, and a good deal more understanding from the point of view of the medical profession. There is no specific action on the part of this Committee, but it meets each quarter for further discussions.

Eben Alexander, Jr., M.D.,
Society Representative,
Winston-Salem
James T. Barnes, Consultant,
Raleigh
[Adopted]

Committee to Study Corporate Medical Practice Plans

Early in his administration, President Zack Owens asked me to investigate the Kaiser Health Foundation. This began during World War II and was originally known as the "Permanente Plan."

Mr. Kaiser began an extensive ship building program on the Western Coast for the United States Government. There was, therefore, a great influx of workers. A shortage of doctors incidental to a great expanded medical corps of all services, created somewhat of a medical crisis. Hence, the "Permanente Plan" developed.

In essence, this was and is a complete medical care program. Outpatient services, as well as inpatient services, are provided. The latter were at first provided in designated, established hospitals. More recently, large hospitals have been built in Los Angeles and San Francisco by the Kaiser Foundation.

Only the ship building workers were served at the onset. The longshoremen and other unions were included later.

Salaried physicians were employed at first. Expanded services brought about new medical relationships. Locally, in various areas, doctors formed partnerships or groups. They, in turn, entered into contracts with the Kaiser Foundation to provide both outpatient and inpatient services, but on a per capita basis for those served. No fee for service program was used. These medical partnerships or groups then divided the money so received on this per capita basis in any manner they determined. These medical groups serve local clinics and the hospitals of the Foundation. It is only natural that the Kaiser Foundation organization is rather complicated.

The side reactions of private medicine have been most interesting. First, the San Pedro situation is briefly recapitulated. (For details, read *Medical Economics*, page 122, February, 1955.) The doctors there were unable to get any satisfactory underwriter among the private insurance companies for a plan of their own. Finally, the California Physicians Service came out with a comprehensive full payment medical and surgical program which seemed to meet their needs. However, the San Pedro doctors insisted, to meet competition from the Kaiser Plan, that there be no income limit. (C.P.S. was then in process of raising the income limit to \$6,000.) C.P.S. finally acceded and all the San Pedro doctors voluntarily participated and added about two hundred and fifty doctors from the surrounding area. They voluntarily subscribed to reduced fees for both outpatient and inpatient service, and offered complete full payment in-service and outservice programs, including laboratory and X-ray. This plan carried with it hospitalization on a three-bed room rate basis. It started with eleven hundred members a year ago. There are now seven thousand members, a large number being union members. Its financial operations have moved from red into the black. The profession pushed publicly one of their outstanding advantages, viz, the free choice of physicians.

On the other hand, one of the great advantages enjoyed by the Kaiser Plan is financial, viz., members are not admitted for inpatient services until the admission is approved by consultation or an admitting board. Nevertheless, they must go to one of the Kaiser hospitals. Members of the California Physicians Service Plan may go to any hospital.

Whether one likes the Kaiser Plan or not, this much must be conceded by those of us devoted to the practice of medicine free of governmental control. The "Permanente Plan" has resulted in ag-

gressive and progressive action by many Blue Shield plans west of Denver. The leaders are covering diagnostic procedures, as well as home and office visits.

There is a lesson here. The viewpoint of the layman must be learned and understood. He wants good care within his ability to pay. The tremendously inflated hospital costs are neither his fault nor that of the doctor. Such is the result of an unbelievably irresponsible fiscal policy of the Federal Government. For twenty-two years, now, there has been an irredeemable paper currency and constant deficit financing with an ever mounting Federal debt. Such makes it harder and harder for those engaged in Blue Cross and Blue Shield activities to predict accurately costs for even a brief period of time.

This situation, however, does not relieve the medical profession of a moral responsibility. That is, to strive more and more to give better and increased comprehensive coverage without governmental interference and control. The facts recapitulated above substantiate this statement. One has only to read the list of ever expanding medical services provided by labor unions to be further convinced. These are listed by the Council on Medical Service and Council on Industrial Health of the American Medical Association in a pamphlet, "A Survey of Union Health Centers."

V. K. Hart, M.D., Chairman
Charlotte
[Adopted]

REPORT OF BOARD OF MEDICAL EXAMINERS

During the past year the very close and fine relationship between the Medical Society of the State of North Carolina and the Board of Medical Examiners of the State of North Carolina has continued. Five regular meetings were held to take care of the large volume of business that comes before the board. A special session was called by the president on February 27th to consider the foreign graduate problem and to confer with representatives of the Executive Council of the Medical Society and also the deans of our medical schools.

Federation of State Medical Boards of the United States

The president, Dr. Amos N. Johnson, and the secretary, Dr. Joseph J. Combs, attended the 1955 annual meeting of the Federation of State Medical Boards of the United States. At this meeting the secretary was elected president-elect of the Federation.

The secretary as a member of the Executive Committee of the Federation attended meetings in Washington in April and in Miami in November, 1954.

Citizenship

At the January 1955 meeting the board resolved that no person be given a full medical license to practice medicine in the State of North Carolina until he has obtained full citizenship in the United States.

Narcotic Addiction—The Board is glad to report that our problems as to narcotics have decreased during the past year. No new addicts have been reported and a number of the old cases have been closed.

Change in Board Membership

Dr. J. P. Rousseau, President-Elect of the State Medical Society presented his resignation as a member of the Board of Medical Examiners at the October 1954 meeting of the board, to be effective at the end of the January 1955 meeting of the board. This resignation was accepted with deep regret.

Dr. Gibbons Westbrook Murphy was elected by the Board of Medical Examiners to fill the unexpired term of Dr. J. P. Rousseau.

The members of your board are:

Dr. Newsom P. Battle, Rocky Mount
Examiner in Surgery

Dr. Joseph J. Combs, Raleigh
Medicine and Therapeutics

Dr. L. Randolph Doffermeyer, Dunn
Physiology and Chemistry

Dr. Clyde R. Hedrick, Lenoir
Pathology and Bacteriology

Dr. Amos N. Johnson, Garland
Pharmacology, Pediatrics and Hygiene

Dr. Gibbons Westbrook Murphy, Asheville
Anatomy, Embryology and Histology

Dr. Heyward C. Thompson, Shelby
Gynecology and Obstetrics

The following is a summary of the work for the past 12 months:

Total number applicants granted license.....	327
By written examination.....	197
By endorsement of credentials.....	130
Limited license.....	38
Hospital residents.....	37
Limited to county or counties.....	1
Borderline practice.....	0
Limited license converted to full license.....	7
Special limited license.....	73
Hospital residents.....	42
Postgraduate foreign exchange students.....	21
Staff state institutions.....	10
Written Examination failure.....	2
Applicants rejected licensure by endorsement.....	0
Applicants declined permission to take written examination.....	0
Hearings.....	8
Narcotic addiction.....	1
Physicians prescribing narcotics excessively.....	4
Physician convicted Federal Court for violation Harrison Narcotic Act.....	1
Petition for reinstatement of medical license.....	2
Investigation by State Bureau of Investigation.....	11
Physician practicing without license.....	1
Laymen alleged to be practicing medicine without license.....	5
Physician prescribing narcotics excessively.....	4
Physician addicted to narcotics.....	1
License revoked.....	1
(Judgment suspended, probation period of two years.)	
(Convicted Federal Court for violation Harrison Narcotic Act.)	
License suspended.....	1
(Narcotic addiction)	
License reinstated.....	1
(Physician convicted in Federal Court for violation of Harrison Narcotic Act)	
Narcotic Special Tax Stamp	
(Board recommended voluntary surrender—Physician prescribing narcotics excessively.)	1
Board recommended reinstatement to Narcotic Bureau.....	1

Amos N. Johnson, M.D., President
Garland
Joseph J. Combs, M.D.,
Secretary-Treasurer, Raleigh
[Adopted]

Committee on Heart Disease Control

The Winston-Salem and Forsyth County Heart Association will present its Sixth Annual Heart Symposium and Clinics in September, 1955.

Participating in the meeting will be another group of nationally famous specialists in Cardiovascular Disease. There is no registration fee, and all members of the medical, nursing, and public health agencies are invited. This program is designed for general practitioners, internists, research workers, and specialists in the field of Cardiovascular Disease. Annual attendance is usually from three hundred (300) to three hundred and fifty (350) physicians.

Post-graduate courses in Cardiovascular Disease are presented in the Spring and Fall at the Bowman Gray School of Medicine of Wake Forest College. These courses are sponsored by the State of North Carolina Board of Health and are designed to cover as much of the field as can be done in the three-day sessions. The Cardiovascular subjects are correlated with other fields—such as Obstetrics, Surgery, Physiology, Anatomy, and Metabolic Diseases.

The Wilson County Heart Association sponsors an annual Heart Day, consisting of Professional and Lay Educational Programs. The schedule usually begins about 10 A.M. and lasts through the evening.

A similar program is conducted by the Robeson County and Lumberton Heart Association.

The courses of the Extension Division of the University of North Carolina have frequently embodied exercises in the Cardiovascular field. These courses are held in strategic areas throughout the State and have been well attended.

Duke University School of Medicine annually conducts a course in electrocardiography.

The Durham-Orange County Heart Association holds monthly scientific meetings. The speakers are usually from out of the state and are specialists in the Cardiovascular field. These meetings have been well attended. These are open to the Medical Profession throughout North Carolina, although notices of the meetings are sent only in the Durham-Orange County Area. These meetings are held alternately at the University of North Carolina School of Medicine and at the Duke University School of Medicine.

The Gaston County Medical Society and Heart Association have an annual Scientific meeting which usually consists of individual presentations as well as panel discussions.

Various local Heart Associations have sponsored Cardiovascular research at Duke University School of Medicine, the University of North Carolina School of Medicine, and the Bowman Gray School of Medicine of Wake Forest College. These local groups have, in addition, given generously in equipment such as oxygen apparatus to various hospitals.

The North Carolina Heart Association has developed into a well organized unit which has grown into a large and effective agency. There is a full-time Executive Secretary. Now, field workers—both Eastern and Western Areas of North Carolina—are employed.

Programs for physicians, nurse and lay education are rapidly developing and will depend for their success on the use of the North Carolina Heart Association's facilities by County, District and State Medical Societies. Full cooperation is to be had by

application to the Executive Secretary the North Carolina Heart Association, Miller Hall, Chapel Hill, North Carolina.

Robert L. McMillan, M.D., Chairman
Winston-Salem

Glenn E. Best, M.D., Clinton

Howard H. Bradshaw, M.D.,
Winston-Salem

Ernest Craig, M.D., Chapel Hill

Ben H. Kendall, M.D., Shelby

L. Everett Sawyer, M.D.,
Elizabeth City

Eugene A. Stead, M.D., Durham

[Adopted]

Committee on Eye Care to Work with the North Carolina State Board of Health, Blind Commission and the School Health Program

The Committee on Eye Care was originally appointed to give the Medical Society a device to evaluate the eye care program carried on in the schools and public health services of the State of North Carolina for children in the school age with the following particular objectives:

1. Of maintaining a high quality of competent advice in the visual screening processes in the schools so as to assure, insofar as practicable and feasible, competent evaluation from medical sources of inherent or developing diseases which might have an adverse influence upon the ultimate visual capacity of the school child.

2. To maintain a liaison between the public agencies of the state and county jurisdictions with reference to programs in the scientific area cited above and to maintain any indicated liaison with other groups which might have assumed a responsibility for the application of visual corrective aids through the choices expressed by the parents or family of the school child.

3. To be aware of developing policy and procedure insofar as the administrative functions of public agencies at the state and county level was concerned where such administrations and procedures were related to the quality of eye care to which the school child of the state was being exposed, particularly when this involved legislative movements so designed as to have an effect upon the health and vision status of the school child.

Although this year has been one in which the legislature meets, no offensive legislation as concerns this committee has as yet been introduced. The Committee has been on the lookout for such legislation and has watched with much interest the controversy between the Optometrists and the Opticians in the State of Oklahoma. It is felt by the Committee that we will always be faced with the possibility of unfavorable legislation until our physicians take the initiative in some form. It is also felt that the problem goes beyond the E.E.N.T. men and is one for the society as a whole. In anticipation of some legislative actions, illustrated posters were prepared at the expense of the society and are available for use if needed.

Advice has been given in cases where sought. No particular problems have arisen concerning visual problems in the schools. No problems have been presented by the public agencies rendering the above services and no offensive practices have been reported or noted.

It is felt that this Committee should continue in existence and that public agencies dealing with eye

care of children and indigents be notified of its being.

The members of this Committee as appointed by Dr. Owens are, as follows:

H. M. Dalton, M.D., Chairman,
Kinston

Marcus E. Bizzell, M.D., Goldsboro

O. B. Bonner, M.D., High Point

H. H. Briggs, M.D., Asheville

Alan Davidson, M.D., New Bern

[Adopted]

Committee on Interne-Trainee Allocations in Non-Teaching Hospitals

The Committee on Interne-Trainee Allocations in Non-Teaching Hospitals, appointed by President Zack Owens met with the State Board of Medical Examiners per invitation of President Amos Johnson in Raleigh on Sunday, February 27, 1955. All three members of the Committee, Drs. Donald B. Koonce, Arthur H. London and George Paschal were present. Dr. London could only remain for about one-half an hour. The meeting lasted from 2:30 p.m. until about 5:30 or 6:00 p.m. Rather prolonged and extensive discussions were carried on and participated in by members of the State Board of Medical Examiners, Deans Carpenter, Davidson, and Assistant Dean Lawson. After the discussion the Committee was thanked for their attendance by President Johnson. Several days after the Committee meeting, the Chairman of the Committee meeting received a letter from the Secretary of the State Board of Medical Examiners, Dr. Combs, to the effect that the State Board of Medical Examiners had gone into Executive Session and decided to continue their present policy of granting to the institutions, the privilege of having foreign trained internes on special licenses, but not granting the same privileges to non-teaching institutions. It might be said that this action was not unexpected.

Donald B. Koonce, M.D., Chairman,
Wilmington

Arthur H. London, M.D., Durham

George W. Paschal, Jr., M.D.,
Raleigh

Addendum: It is to be noted, as this report is being prepared, that a conference on Interne allocation and distribution has been scheduled at the University of North Carolina, April 14, 1955.

[Adopted]

Committee on Cancer (1 from each Congressional District—12)

During the year covered by this report, very little has been accomplished by the Committee on Cancer, but it is felt that plans have been laid, whereby much progress can be made in the future. There was one meeting held on February 22, 1955, in Raleigh, attended by Drs. Riddle, Schafer, Howard, Marshall, Camblos, Fuller and Koonce. At this meeting, the Chairman explained that there had been no functioning of the Committee because of the expectation of the results of the Survey by the American Cancer Society, and its recommendations for the North Carolina Division of the American Cancer Society. The Survey has been completed, and it is in the hands of the Survey Committee of the North Carolina Division of the American Cancer Society.

The Survey Committee is in the process of making recommendations to the North Carolina Division. A motion was made, and passed at this meeting, that the Director of the Cancer Division of the North Carolina State Board of Health, send to the individual members of the present Committee a list of existing rules and regulations now in effect covering the management of the cancer diag-

nostic and the detection centers and those rules in effect for the care of indigent patients.

The Chairman of the Cancer Committee was empowered to request of the North Carolina Division of the American Cancer Society and the North Carolina State Board of Health that a joint committee of the three groups be appointed as a coordinating committee to further the aim of the three individual groups. The Chairman was empowered to appoint representatives from the Cancer Committee to this group.

The Cancer Committee made the following recommendations to the North Carolina Board of Health, in answer to the request of Dr. A. H. Elliot, for such recommendations. First:—That all hospitals approved by the State Board of Health for the treatment of indigent cancer patients, and those hospitals who co-share the facilities of diagnostic and x-ray surgery, x-ray and radium therapy with such hospitals be also approved. Second:—That recommendations be made to the North Carolina Board of Health, that only qualified men be approved by the State Board of Health to participate in the care of indigent cancer patients, and that by qualified it be meant diplomates of the American Board of Fellows in the American College of Surgery or the American Radiological Society, or other respective colleges and boards.

A suggestion was made that the incoming president, Dr. Rousseau, be requested to re-appoint as many members of the present Cancer Committee as possible, so that the work started at this meeting may be adequately organized and continued during the next twelve months.

It was suggested that another meeting of this committee be held, as soon as the recommendations to the Survey Committee of the North Carolina Division were published. Dr. Elliot thought that the State Board of Health be asked to attend the meeting.

Donald B. Koonce, M.D., Chairman
Wilmington

Charles I. Harris, Jr., M.D.,
Williamston

H. Fleming Fuller, M.D., Kinston

Corbett E. Howard, M.D.,
Goldsboro

Hubert Poteat, Jr., M.D.,
Smithfield

James F. Marshall, M.D.,
Winston-Salem

Robert Creadick, M.D., Durham

Zack Long, M.D., Rockingham

Irving E. Shafer, M.D., Salisbury

William H. Pettus, Jr., M.D.,
Charlotte

Harry D. Riddle, M.D., Gastonia

Joshua F. Camblos, M.D., Asheville
[Adopted]

Committee on Publications

As Chairman of the Committee on Publications I have to report the annual meeting of the Editorial Board of the N. C. MEDICAL JOURNAL, Tuesday, May 4, 1954, Pinehurst, North Carolina, when discussion was had on the editorial and managerial progress of the Journal. All members were present with one exception due to illness in his family. It was the consensus of view that there be no fundamental changes in the format and editorial policy. There was general urging that those facilities responsible for the Journal production be urged to bring the publication out on the scheduled publication date of the fifteenth of the month. The general advertising and expense of the publication,

though on the increase respectively, appeared to be in proper balance as for previous years.

M. D. Hill, M.D., Chairman, Raleigh
John Borden Graham, M.D.,
Chapel Hill
Wingate M. Johnson, M.D.,
Winston-Salem
G. Westbrook Murphy, M.D.,
Asheville
William McN. Nicholson, M.D.,
Durham
[Adopted]

Committee on Scientific Work

This Committee respectfully refers to the published program of the Society as carried preliminarily in the March issue of the N. C. MEDICAL JOURNAL and as more completely agendized in the official printed program. A great series of efforts over many months of painstaking preparation is reflected in the program's content. It is the belief of the Committee that the essayists arranged for the General Sessions, the speakers and the panelists on the Scientific Sections program will bring to light the consistent scientific advances carried on in the many facets of medical research and clinical findings in the establishments for which our state is now noted.

The President has counselled and contributed markedly in the selection of the principal guest participants in the General Sessions and, through the Chairmen, and the eleven Scientific Sections. The prospects of progressive and efficient revelation of scientific advances will characterize this Annual Session. Much effort has been made to assure excellent scientific instructional courses in the pre-Sessions Postgraduate Audio-Visual Programs Sunday and Monday.

The Executive Secretary and his staff have shown the customary capacity for minute detail in preparation of the program and the procedural devices which are essential to the conduct of the Scientific Sessions and Sections.

It is the wish of this Committee that the attendance of Fellows upon the educational features of scientific and technical displays may be full and deliberate to the end that these educational devices, arranged at great effort and expense, may be exploited for their true worth.

M. D. Hill, Chairman, Raleigh
Lenox D. Baker, M.D., Durham
[Adopted]

Committee to Arrange Facilities for Annual Sessions

In compliance with actions of the House of Delegates final plans have been concluded to hold the 1955 Annual Sessions at Pinehurst, May 2-4, 1955.

The finest program ever devised for the society has been organized and is in readiness to be portrayed through the four days scheduled May 1st to 4th. The program consists of essays, panels, audio-visual projections, and still displays of scientific and technical substances. Proper business schedules have been prepared.

Moreover, the entertainment features are anticipated to be the greatest and most satisfying in a long train of successful Annual Sessions.

No effort has been spared by the officers and the staff in planning a memorable annual program of worth and pleasure for all the membership.

M. D. Hill, M.D., Chairman, Raleigh
J. C. Grier, Jr., M.D., Pinehurst
M. W. Marr, M.D., Pinehurst
[Adopted]

Committee to Extend the Annual Sessions

This committee met in due course and weighed

all factors related to the possibilities of extending the Sessions beyond the traditional three days of program.

Marked limitations in respect to facilities in all North Carolina communities at this time appear not to be conducive to such extension, particularly within the Pinehurst community. Divisional meetings appeared impracticable by sections of the State.

The single practical devise for 1955 was the audio-visual instructional program method now experimented with for two years. The Committee thoroughly explored this and recommended that this feature of the Annual Sessions be given every possible emphasis in 1955. It readily meets the criterion of the postgraduate work of the AGP and will be designed to offer accredited hours of postgraduate instruction. In addition the Sectional programs will give particular emphasis to such accreditation in some of these programs.

M. D. Hill, M.D., Chairman, Raleigh
 Lenox D. Baker, M.D., Durham
 George C. Ham, M.D., Chapel Hill
 Roscoe D. McMillan, M.D.,
 Red Springs
 [Adopted]

Committee on Legislation

The Committee met August 20, 1954, at Wrightsville Beach with a full quorum in attendance, the Executive Secretary and the Attorney being present. The whole prospective agenda of favorable and anticipate unfavorable legislation was reviewed. General attitude of the Society's and its position on these matters was concluded.

This report is at the interim of the fifteenth week of the 1955 General Assembly. Except for the bill to establish a medical examiners system, as an adjunct to the constitutionally provided County Coroner, the Society had not commissioned this Committee to seek legislative enactment of laws related to medicine.

The Committee has, in cooperation with the Executive Secretary and the Society's Attorney kept daily advised on legislative introductions, reports of legislative committee action and the concluding actions of the respective House of the General Assembly on all measures wherein there was an interest and relationship to the public health and the practice of medicine. The Committee and the staff has held itself available for advice and counsel to the public Representatives at all times.

Numerous measures of questionable soundness have been consulted upon and for the most part, these have either failed of favorable action or have been amended in line with principles scarcely inimical to or contrary to the expressed views of the Society. Some measures have been vague and of dubious benefit to the public. Where necessary and proper these have been counselled against. Moreover, positive efforts have attended certain salutary measures.

While the agenda of pertinent bills has been large, no very great changes appear to be in the offing as the outcome of this biennial General Assembly. But of course, the session may yet present real problems for your Committee to counsel upon in which event the staff and the Committee will continue the essential effort.

Millard D. Hill, M.D., Chairman,
 Raleigh
 J. Street Brewer, M.D., Roseboro
 Donnell B. Cobb, M.D., Goldsboro
 William M. Coppridge, M.D.,
 Durham
 Alan Davidson, M.D., New Bern
 Vonnie M. Hicks, M.D., Raleigh

Roscoe D. McMillan, M.D.,
 Red Springs
 Alban Papineau, M.D., Plymouth
 William H. Pettus, Jr., M.D.,
 Charlotte
 John C. Young, M.D., Asheville
 [Adopted]

Committee on Necrology

The Committee on Necrology, through its chairman, has held several conferences with the executive secretary and has been in active communication with him otherwise in developing a complete list of the deceased physicians in the State during the period April 1, 1954, to March 31, 1955. All sources of newspaper clippings, state vital statistics reports, county society membership reports and general verified information has been resorted to. Finally, the Chairman of the Necrology Committee and Headquarters Office has made a concentrated and last minute effort to secure all possible information on deaths of physicians occurring in the State.

In cooperation with the President of the State Society, Dr. Zack D. Owens, and with the Headquarters Office, a program of recognition, devotion, inspiration and music has been prepared for presentation at Pinehurst, Sunday evening, May 1, 1955, and will be staged both in memory of the deceased physicians as well as the deceased wives represented in the auxiliary.

Charles H. Pugh, M.D., Chairman
 Gastonia
 Ben F. Royal, M.D., Morehead City
 J. Buren Sidbury, M.D., Wilmington
 [Adopted]

Committee on Child Welfare

This committee has been largely inactive during 1954-55.

On February 28, 1955, the committee, consisting of Dr. Sidbury, Dr. Curnen, and me, recommended to Dr. Owens that the use of the Salk vaccine in the first and second grades in 1955 be endorsed.

On Monday, March 21, 1955, the chairman attended a meeting of the planning committee, at which methods for local care of polio patients was discussed.

The committee is concerned because of the situation regarding the early reporting of premature births as detailed in the following table.

Premature Births Known to Health

Departments in 1953	No. of Counties
Less than 10%	35
Less than 25%	42
Less than 50%	17
Over 50%	6

This situation should be brought to the urgent attention of all physicians who deliver and care for newborn infants, as well as to hospital administrators; early reporting is essential as adequate care can be given only if these infants are reported within the first 24 hours after birth. Improvement in this one procedure would cause a marked lowering of our neonatal mortality, which from 1951-53 has varied from 32.7 to 35.5 per 1,000 living births, whereas the national average in 1951 was 28.4.

Angus M. McBryde, M.D., Chairman,
 Durham
 Katherine Anderson, M.D.,
 Winston-Salem
 Edward C. Curnen, M.D.,
 Chapel Hill
 J. Buren Sidbury, M.D., Wilmington
 [Adopted]

Committee on Mental Hygiene

The Mental Hygiene and Doctors Rehabilitation Committee have had three meetings during the year.

In September, I, as chairman of the committee made two trips to Chicago in interest of the work of this committee. Once to participate in a panel discussion for the Public Relations Department of the American Medical Association on the relationship of psychiatrists and the clinical psychologist.

The other, a two day meeting of chairman of the mental hygiene committee including all forty eight states exchanging ideas of what the other committees were doing.

At our fall meeting held in Raleigh we had a full attendance of the Committee. The Committee voted to help the State Board of Health in its efforts to obtain money from the legislature to establish mental health clinics throughout the State. At this meeting also the Medical Practice Law of North Carolina was discussed and after having a discussion with the attorney of the State Medical Society it was felt that this medical practice act was as strong as it could be made. The Committee discussed the request of the clinical psychologist in this State that they be licensed by a board set up by the Governor. The motion was passed to ask the Legislative Committee of the State Medical Society to veto this plan. On a request from the advisory committee of the Department of Public Welfare the sterilization laws were reviewed and was voted to ask that a law be supported requiring two physicians, one which should be a psychiatrist to sign the sterilization papers. The last item for discussion was the question of setting up the committee in the sub-groups. This was done. Dr. Tom Jones of Durham as chairman of the Alcoholic Division, to serve with him are Drs. Proctor and Proctor. The second subcommittee is composed of Dr. Burke Suitt, Chairman, Dr. Joe Stevens, and Dr. Dave Hawkins to work with him on a state level with the clinical psychologist. Our next meeting was held in February in Raleigh, at which time Dr. David Young brought up the question of marriage for epileptics. After much discussion it was voted for him to introduce a bill in the legislature changing the words of the marriage certificates to read: (controlled epileptic seizures).

Dr. Suitt brought up the question of the bill to be introduced to the legislature entitled (An Act to stablish Presumptions of Drunken Driving From the Alcoholic Content of Defendant's Blood). After much discussion it was felt that the bill was not sound due to lack of research in this field, and it was voted to ask the proper authorities that the bill be killed. This was done. A report from Dr. Tom Jones of the alcoholic subcommittee was the fact that he had a meeting at Watts Hospital which lasted two hours. Dr. Jones was moderator, Dr. Tilbout and a local pastor were on the panel. It was well attended. The Committee took notice of the fact that thorazine is dangerous where driving and suicide are concerned and should be rigidly controlled as to dispensing. It was also aware of epilepsy and the matter of driving cars. It was brought out that in sixteen states legislation specifically prohibits drivers licenses to epileptics. In thirty-one others it gives the license official broad powers to deny the license to any one who in his opinion might not be a safe risk. No action was taken on this discussion.

We have one request for help from our loan fund from one of the doctors in this state who is a narcotic addict. It was decided to help this man

provided he adhered to the following request. 1. Is that his sisters sign a note for the loan at 3% interest. That he give up his narcotic license and that he himself go to an institution of our choice and that he remain there as long as his attending physician advises.

Allyn B. Choate, M.D., Chairman,
Charlotte
David R. Hawkins, M.D.,
Chapel Hill
Leslie B. Hohman, M.D., Durham
Thomas T. Jones, M.D., Durham
Richard C. Proctor, M.D.,
Winston-Salem
Joseph B. Stevens, M.D., Greensboro
R. Burke Suitt, M.D., Durham
Lloyd J. Thompson, M.D.,
Winston-Salem
James T. Vernon, M.D., Morganton
Thomas W. Wright, Jr., M.D.,
Charlotte
David A. Young, M.D., Raleigh
[Adopted]

Committee Advisory to the North Carolina State Board of Public Welfare

The Advisory Committee of the State Medical Society to the State Board of Public Welfare has had two meetings during the last year, both of which were well attended. The Committee was composed of Mr. James Barnes, Executive Secretary of the State Medical Society; Dr. J. Street Brewer, Roseboro; Dr. A. H. Elliot, State Board of Health; and Dr. Raney Stanford, Durham. The State Board of Public Welfare was represented by Dr. Ellen Winston, Commissioner. Dr. Fred Hubbard, North Wilkesboro, was unable to be present.

Attention was called to the publication of a full report of the work of the Committee in the Journal of the State Medical Society.

It was agreed that physicians probably had more information with regard to the Cancer Institute at Lumberton than a year ago. A luncheon meeting with a program to follow has been planned by the Board of Directors for December 3, 1954, for county superintendents of public welfare. Information has been carried in the Journal. Mr. Barnes requested 3,000 folders describing the Cancer Institute for general mailing from his office.

As a follow-up of the 1953 meeting an article on boarding homes for the aging and infirm has been published in the September 1954 issue of the Journal. Also lists of licensed homes have been sent to secretaries of county medical societies.

A year ago the Advisory Committee requested further work with the National Foundation of Infantile Paralysis on the development of standards for utilization of its funds to help families that could not pay for necessary treatment. Dr. Winston reported that the first step toward the development of standards for screening cases had been taken by the National Foundation.

Further work will be done in following up on hospitals which keep indigent patients considerably longer than the average number of days for such cases for the State as a whole. These hospitals can be identified through data supplied by the Medical Care Commission. It was suggested by members of the Committee that such hospitals probably have a higher than average number of days for all types of cases due to differences in medical practice.

Dr. Winston reported that upon authorization of the Committee, the State Board of Public Welfare had written to five doctors who had been active in the placement of babies for adoption, contrary to law. None of the physicians replied to the letter but there has been no further evidence that they engaged in such procedures.

Dr. Winston reported that the State Board of Public Welfare now has the services of Dr. Nelson Thompson, Medical consultant, two half days per week instead of one half day as formerly.

Dr. Robert H. Barnes of Duke Hospital has been employed by the State Board as Psychiatric Consultant with emphasis placed upon his help in the in-service training program for county staffs. The procedure for use of such psychiatric consultation was reviewed. Dr. Brewer discussed the problem of known mental cases with lack of any procedure for requiring that they have needed treatment.

With respect to boarding homes for the aging and infirm, it was reported that the State Board of Public Welfare held a one-day institute during the summer when all rules and regulations were reviewed with representatives of State and County agencies. As a result revised regulations were adopted by the State Board of Public Welfare on August 11, 1954. Recently, it has been possible to strengthen the protection given in these homes by requiring that any new home meet institutional building code standards with respect to fire protection.

Dr. Winston reported that one hearing case has come before the State Board of Public Welfare. In this instance, the operator failed to obtain prompt medical attention for an aged guest who fell and broke her hip. Dr. Nelson Thompson was present at the hearing to advise on the medical aspects. A provisional license has been issued with the understanding that adequate supervision and care must be provided in the future.

The thinking of the Committee with regard to chronic hospitals and nursing homes was requested. The State Board of Public Welfare is of the opinion that any chronic hospitals should be located close to general hospitals so that adequate treatment may be available as needed. It is also opposed to the development of large public institutions which would give an institutional atmosphere to the care of aged people as contrasted with the emphasis on home-like surrounding. Dr. Stanford stated that he believed any chronic hospitals should be close to general hospitals. He also expressed approval of private convalescent homes as contrasted with public institutions.

He further discussed the problem of meeting the medical needs of both the indigent and the medically indigent. He stated his opinion that no fees should be charged by physicians for care of the indigent. He believes that a reasonable system of fees should be worked out for the medically indigent. There is little evidence that fees are charged for the care of indigent in North Carolina. Dr. Stanford emphasizes the value of free patients for teaching purposes and the need for service cases for interns in hospitals.

Dr. Winston brought to the attention of the Committee the revised regulations of the State Board of Public Welfare with regard to hospitalization of public assistance recipients, dated July 1, 1954, which provided for payment of \$8.00 per day for Federal-State-local funds. She also reviewed the growing interest in some form of pooled fund. This is being supported by the county commissioners for consideration by the 1955 General Assembly. Hospital administrators are already generally on record in favor of such a plan. It was moved that support of a pooled fund plan by the State Medical Society be recommended to the Executive Council of the Society, upon motion of Dr. Brewer, seconded by Dr. Stanford. The Chairman was instructed to bring this to the attention of the Executive Council.

In the discussion of the above item it was pointed out that there need be no fear of such a plan so long as the people who need medical care are certified in the county and some State and/or local money is involved in payment.

Dr. Winston reported that the Department of Health, Education, and Welfare has under consideration some changes in provision of the Federal share of costs of medical care for public assistance recipients.

She further reported upon the exchange of correspondence with Mr. Marshall Pickens regarding some change in terminology with regard to patients whose hospital care is paid for by someone else. It obviously is incorrect to refer to such care any longer as "free days."

Attention was called to the July 1954, issue of the "North Carolina Public Welfare Statistics." A special article indicates that voluntary health agencies spent a total of \$137,000 on care of clients of departments of public welfare during 1953.

The need for greater utilization of the sterilization program under the Eugenics Board was discussed. Dr. Choate will review this matter with the Mental Hygiene Committee of the Medical Society also. Dr. Brewer emphasized the importance of greater utilization of this program. Dr. Stanford suggested that perhaps more attention to this matter could be given through the three medical schools in the State. It was suggested that a letter be written from the Committee to Dr. Richardson with regard to this matter.

The legislative program of the State Board of Public Welfare was reviewed. Upon motion of Dr. Stanford, seconded by Dr. Brewer, it was suggested that the legislative program of the State Board of Public Welfare be sent to the Legislative Committee of the Medical Society.

Developments on items mentioned in the minutes since the last meeting of the Committee were reviewed. The Medical Care Commission form for certification of patients has a new item which will indicate whether or not patients stay in hospitals longer than the committing physician anticipates. This will be helpful in connection with clarification of reasons for the differences in average length of stay in comparable hospitals. It was suggested that the experience of the Blue Cross Associations with regard to length of stay might be checked.

A report was given on the letters written to physicians who handle adoptive placements, contrary to law. The State Board of Public Welfare was authorized to continue to write such physicians in the name of the Advisory Committee. If there continued to be misunderstanding on the part of any physician around the proper role of the various professions with respect to adoptive placements, the Committee suggested referral to the Grievance Committee of the State Medical Society. It was decided that a brief article on adoptions to be signed by Dr. Choate should be prepared for the *Public Relations Bulletin* of the Society. This article of 100 or 150 words will be cleared with Dr. Choate.

The group was brought up to date with regard to the program of boarding homes for the aging and infirm. A second supervisor, who has had long time experience in public welfare, has been added to the staff of the State Board of Public Welfare. There are now over 275 licensed homes and a study of all residents in these homes is nearing completion. A series of meetings is being held throughout the State for the operators of the licensed homes and county welfare staff members with whom they work. The National Association of Nursing Homes is seeking to organize a group in North Carolina and will meet early in April. The Advisory Budget

Commission recommended an increase from \$25,000 per year to \$40,000 per year for the next biennium to supplement the public assistance grants for former State Hospital patients who must be planned for in licensed boarding homes.

There was considerable discussion as to how the members of the Committee might help in gaining support for the bill which would give the Medical Care Commission responsibility for licensing convalescent homes which are medical facilities as contrasted with the domiciliary type of care licensed by the State Board of Public Welfare.

The Committee discussed the bill providing for a pooled fund for hospitalization of public assistance recipients, and again gave it full support. It was agreed that if the bill is enacted into law, there must be discussion with the Committee, representatives of the Hospital Association, and other concerning implementation.

As a follow-up on the discussion on materials to interpret the Eugenics Board program, contacts have been made with the three medical schools. The new pamphlet on "Sterilization—The North Carolina Program" was distributed to Committee members. A number of meetings of Health and Welfare personnel in counties are being held in order to discuss this program. Dr. Winston was requested to write to Mr. Barnes about further use of the pamphlet on sterilization.

Reference was made to one of the facilities licensed by the State Board of Public Welfare for the care of alcoholics with the request that a current inspection be made since apparently there has been a change in the medical supervision. Dr. R. H. Barnes, Psychiatric Consultant to the State Board of Public Welfare, will be asked to make another inspection promptly.

Dr. Winston brought to the attention of the Committee some of the problems arising around part-pay patients in hospitals. It is difficult to work out problems of payments equitably for such patients, who perhaps have enough insurance to help take care of part of the cost or who can make partial payments from other resources. The Advisory Committee approved further exploration of this problem with the Medical Care Commission looking toward more uniformity and simplification in certification of all patients who cannot pay or who can pay only part of the cost of hospitalization.

"Suggested Principles For Hospitalization of Indigent Patients" as approved by the State Board of Public Welfare on August 11, 1954, were reviewed with the Advisory Committee. Members of the Committee agreed with the State Board of Public Welfare upon the soundness of these principles and gave their full endorsement.

The State Board of Public Welfare has been designated by the Governor to handle certifications for the "disability freeze" under the Social Security Act. The initial plans for this new program were reviewed by Dr. Winston with the Advisory Committee. A tentative article which will give basic information to physicians throughout the State with regard to this program was distributed to members of the Committee with the request they review it in terms of possible publication in the Journal of the State Medical Society. Prompt approval was received from all members of the Committee and the article made available for publication.

Dr. Winston discussed briefly the experience of the State Board of Public Welfare with group care of infants and suggested some of the questions which have arisen as to the desirability of this type of care. The Advisory Committee went on record as being opposed to this type of care and requested that the matter be referred to the So-

ciety's Committee on Child Welfare for further study.

Dr. Stanford discussed the problem of needy people not being hospitalized as needed and the fact that service varies widely throughout the State. He expressed concern for more equalization of opportunity for needed medical care. He reviewed his plan to encourage the medically indigent to buy as much insurance as possible with the difference between the insurance and actual cost of care being subsidized. He felt that the medically indigent could afford small fees to the physician. He recommended no change in the plan for entirely free medical and hospitalization care for the indigent, recognizing at the same time the need for additional funds.

Allyn B. Choate, M.D., Chairman
Charlotte
J. Street Brewer, M.D., Roseboro
Avon H. Elliot, M.D., Raleigh
Fred C. Hubbard, M.D.,
N. Wilkesboro
William R. Stanford, M.D., Durham
[Adopted]

Report of Dr. G. W. Murphy, Chairman, Committee to Study Cooperative for Professional Liability Insurance to Executive Council

I am giving this report to you largely as a matter of information, although I do hope you will take some action on it. The report as I give it to you, however, is mine and has not been officially adopted by my Committee, although I do not believe it is controversial in any way.

I would divide it into three parts.

Our Committee was directly appointed for the organization of some sort of cooperative insurance company to furnish professional liability insurance to our members.

With Mr. Barnes' help and that of the American Medical Association, and many others, we have collected a good deal of information on the subject and had a helpful conference with Mr. Charles Gold, the Commissioner of Insurance, and some of the members of his staff.

Without going into details, I will say that it is my opinion, based on the information up to this time, that with a total membership of something over 2500 or 2600 and with a potential participation in a cooperative plan of 2000 or thereabouts, it is not practical for the Medical Society of the State of North Carolina to undertake a cooperative plan at this time. I think it is a well-founded opinion, and that we should abandon that idea.

We are in a rather serious situation, of course, in that the Aetna Life Insurance Company has cancelled our group policy and at the present time our membership are dependent entirely on their own efforts as individuals to get liability insurance, and so if we recommend to you that we abandon the idea of a cooperative plan, we feel that we should suggest a course of procedure.

It is quite apparent to us who have been interested in this subject that the financial coverage which has been provided heretofore by a commercial insurance company is the backbone of it, and it is absolutely essential, but it is not the whole program by any manner of means. We feel very strongly that in addition to trying to provide for protection against financial loss, the Medical Society of the State of North Carolina should launch into a program of education and stimulation of participation that would improve the strength by setting up the proper agencies for observation, review of cases, and expert legal defense, if you please, to cut down the incidence of losses which would, of course, be reflected in our insurance rate as well as give us highly desirable security.

The second thing that I would suggest is that we adopt a plan of procedure, I am going to read to you:

The liability program must be undertaken on a long-term basis, planned carefully and boldly, and stay with it for a sufficient period of time to allow the results to show.

There must be a sufficiently large number insured under the program to spread the risk adequately. This means the participation of not less than 65 per cent of the eligible physicians in the program.

Every physician must realize that the program is an active one. He must realize that when any member of the group sustains a claim for malpractice, every physician in the group is injured thereby. The payment of the premium is only part of the individual's liability, and he must support the plan. He must learn what is required of him.

The State Society itself must take active steps to see that no actual malpractice occurs. Lectures, clinics, refresher courses should be organized. Every county medical society should have at least one meeting per year devoted to the instruction in malpractice prevention. The Society should regard the establishment of an active claim prevention service as a prime responsibility.

The group should do everything possible to insure that its Grievance Committee to deal with complaints as to professional conduct is active and respected.

A reliable insurance carrier willing to write the insurance on a long-term basis must be secured. The carrier must assure the Society that regard will be had to the suggestions of the Society as to the underwriting and as to the acceptance of applicants, although it will not be possible to make such suggestions mandatory on the carrier.

The carrier must undertake not to require members of the group to purchase other types of insurance as an inducement to the issue of professional liability policies.

The Society should nominate competent consultants in all specialties to whom the carrier may apply for service on problems arising.

The carrier must assure the Society that the personnel writing the insurance is especially trained in this type of insurance.

The carrier must agree that the burden of giving each individual physician the proper coverage is upon him and not upon the Society.

The carrier must provide for the processing of claims by personnel specifically trained in this work.

The carrier and the group, in cooperation, shall select a list of attorneys for the trial of malpractice suits, and the individual physician shall be allowed to select any attorney in his locality who is on the list to defend any suite brought against him.

The carrier as well as the group should institute adequate educational and claim prevention activities so as to keep the importance of this subject constantly before the individuals and the group.

G. Westbrook Murphy, M.D.,
Chairman, Asheville
R. B. Raney, M.D., Chapel Hill
Robert A. Ross, M.D., Chapel Hill
Nathan A. Womack, M.D.,
Chapel Hill

[Adopted]

Committee on Emergency Medical Service

The Committee on Emergency Medical Service reports one meeting of the Committee and member attendance at two national conferences on civil defense. However, it has not been particularly active beyond these standby evidences. We have to

report: First, the organization of hospital units, surgical teams and blood taking teams worked out by plan and developed into personnel groups in 1950 have been dormant for the most part of three years and to undertake to regenerate, revise and reactivate these personnel groups demanded something of a stimulus from the state civil defense level which reflects public apathy toward Civil Defense in general. Second, the State office of Civil Defense has not been markedly active in promoting medical service aspects of civil defense.

No light conception of medicine's ultimate responsibility in a modern national emergency can be taken and surely medicine will have its responsibility for organization and projection of a policy and program if the profession is to assume any workable basis for sharing its responsibility in the event of a national emergency, particularly emanating from an enemy source.

Again we state that through State appropriations (1952) approximately \$60,000. worth of medical supplies and material is now on storage at the State Laboratory of Hygiene. This inventory has been repacked into 30 kits each marked and designated to one of 15 areas (or districts) listed by the State Office of Civil Defense and these kits are to be substored in each of the 15 District State Highway Storage facilities so they may become promptly available to the mobile units for that particular area of the state. On the whole, these supplies are stable and non-perishable, but some of the antibiotics are not stable and quantities will have to be brought into usefulness before expiration dates. An effort is being devoted to this arrangement for use and replacement upon which we do not report here.

At the request of President Zack Owens, of the Medical Society, your chairman attended a Regional Advisory Council on Civil Defense in Atlanta, Georgia, which was also attended by representatives of the State Civil Defense program. The principle gain from those discussions related to the inclusion of transportable mobile equipment. Study of this equipment appears to indicate it is quite suitable and effective for emergency utilization; so we have urged upon the officials of the North Carolina Civil Defense Office that it undertake to secure funds or appropriations sufficient to purchase one of these \$13,000.00 units for experience purposes. This would enhance the operational interest of the treatment units which have been organized in the State of North Carolina and give particular impetus to the several hospital units to a closer organization through experimental operation.

At the request of the President of the State Medical Society, Dr. George A. Watson, Durham, attended a regional medical civil defense conference conducted in Washington, D. C., in March, 1955. His report is as follows:

Attendance Public Health Service—Civil Defense Conference

As you know, mid March, I attended the Public Health Service Regional Civil Defense Conference at Washington. I take it I was there on invitation because my designation on orders was "Private Citizen". I am not sure that I should have gone in the first place, and certainly wouldn't have, if it had not been for Dr. Chauncey Royster. However, the statement that unless some of us did attend we would throw this entire Civil Defense Program over to the Public Health Service by default, struck home. In any event, that seems to be the trend, if this conference was any indication, since I was the only person there not connected with the Public Health Service.

The meeting itself was a two day affair of standard pattern. On opening day there were briefing sessions on such subjects as Nuclear weapons, Biological warfare, and Chemical warfare defense. There was nothing particularly new or startling in these papers, but they were concisely and adequately presented by men who impressed me with their competence. I was equally impressed by talks given by the Chief of the Communicable Diseases and Sanitary Engineering Center. True, lots of this was out of our field, but I got the idea that some sound, constructive work is being done behind the scenes. I couldn't help but think that the boys on top are solid, and thought the first day's program went well.

I should have gone home after the first day. The second day had the participants divided up into five groups. Mine had to do with "Mass Evacuation," and like the rest, we were supposed to evaluate this subject and make suggestions and recommendations to the "power-that-be" as to means of dealing with it on a state and local level. With a rare exception, the subjects were vague, impractical, even ridiculous, but in every group they were unanimous on two points:

- (1) Public Health Officers need more money.
- (2) Public Health Services need more personnel.

During the entire time I did not hear one practical suggestion as to what was being done by any individual below the Federal level. Maybe that is the reason I protested vigorously against any more resolutions or requisitions. I think at that, I would have climbed on a chair and cheered for any character who had sufficient "intestinal fortitude" to suggest that some fundamental, workable plan might be made with the funds and the resources which we now possess.

As to the digest of the entire session, for what they are worth, these are my sentiments:

(1) The introduction of the Hydrogen bomb has so multiplied the scope of this problem that it has gotten almost out of sight. With the danger of radio-activity matter in the fall-out areas and the newer concept of mass evacuation, our plans for casualty treatments seem very antiquated and insignificant.

(2) We now need training in Meteorology, Aerobiology, Chemical and Radiological warfare along with everything else.

(3) I think with a problem of this size it has got to be thrown back to the individual. It is going to be a basic matter of survival and our primary purpose is one of education and instruction, giving these people every possible chance to get through the chaos they are sure to face.

(4) It looks as though individual or family survival kits may be all important. Such basic things as blankets, beans, and chlorine may very well make the difference.

(5) Communications are most important, when you consider the confusion of mass migration. Car or battery-powered radios place high on my priority list.

(6) There is still the need for equipment and also the delay with the same inadequate explanations. The battle of words about standardization goes on. Somehow we ought to buy or build some basic things (as geiger counters) and not be troubled about specifications.

(7) Lastly, a more searching study of the resources and personnel that we do possess. This followed by a very simple S.O.P. based on three findings to deal with the disaster that might happen tomorrow.

Respectfully, George A. Watson, M.D.
Therefore, it is recommended that the Committee

be continued during the next year and that in cooperation with the Director of the Office of Civil Defense in North Carolina that a definite effort be made to regenerate the old plan of medical personnel and medical participation in civil defense or that some other course involving principals and procedure be worked out in cooperation with General Edward Griffin in connection with current concepts which may be determined after negotiating with General Griffin and his staff.

W. W. Kitchin, M.D., Chairman
Clinton
J. Kingsley MacDonald, M.D.,
Charlotte
J. W. Roy Norton, M.D., Raleigh
Harry D. Riddle, M.D., Gastonia
Ben F. Royal, M.D., Morehead City
Chauncey L. Royster, M.D., Raleigh
George A. Watson, M.D., Durham
Martin Robert Wisely, M.D.,
Edenton
Joseph W. Hooper, M.D.,
Wilmington
[Adopted]

Committee on the Archives of Medical Society History

The Committee met on the evening of March 16, 1955, at the Pitt County Memorial Hospital, Greenville, North Carolina. Present at the meeting were: Dr. John Winstead, Chairman, Greenville; Dr. Ernest W. Furgurson, Plymouth; Dr. James B. Bullitt, Chapel Hill; and James T. Barnes, Executive Secretary, Raleigh. Dr. Strosnider had extended his proxy inasmuch as he had been called to South Carolina for a death in his family.

The following premising statement was adopted by the Committee:

There is evidence of a recurring interest in the medical profession in having its episodes of progress, achievements, and advancements recorded historically for posterity. Moreover, man's desire to credit man's achievements to those principal leaders who make such achievements possible appear to be no less true of the men in the medical profession. Therefore, the Medical Society of the State of North Carolina authorized a committee several years ago to investigate the practicality of discovering information related to the medical history of North Carolina and the physicians who made such history.

Some research had been done, principally by Dr. Hubert A. Royster of Raleigh, which it was thought might be made available as a beginning resource. Dr. William deB. MacNider of Chapel Hill had, too, manifested an interest and in his declining years was encouraged to undertake some effort for facets of the history of medicine in the educational field as well as for information on those principals who had contributed to that history so fully.

Moreover, the Committee sensed that much medical history lay dormant in the records and recollections of the older men of medicine at the local county and community level; so that a movement was made to generate county historical committees and a considerable effort was put forth in this direction during the years 1950-1953. The majority county medical societies did name local committees and gave some evidence of a move in the effort to collect data, records and information which ultimately might become collectible for use with the other resources mentioned. The Committee was fairly unorganized in 1953 and in early 1954. The present committee is meeting now for the first time and does seek what determinations and directions it should take. Perhaps that may be stated as its purpose now, but out of this deliberation it would

hope to develop a fairly defined program and project it in the future, if it is the sense of the State Society that this effort should go forward.

An agenda of eleven items were on slate for discussion and these are reported upon in line with discussions and actions of the Committee.

1. Report relative to contacts had with Dr. H. A. Royster and the availability of his collection of historical and/or writings on the subject.

It was suggested in the absence of Dr. Ivan Procter that Mr. Barnes defer to Dr. Procter as to what could be incorporated into this report as to his contacts with Dr. Royster. (Note: A conference has been had with Dr. Procter and Mr. Barnes has prepared for the Committee an enumeration of all materials and writings which Dr. Royster has entrusted to Dr. Procter to April 20, 1955, and this enumeration will form a part of the files of the Committee at Headquarters Office, to serve as a resource direction for the ultimate use of the material. Another suggestion is that Dr. John Hamilton be contacted by Dr. Procter in reference to the filing in the state-wide library located in the Laboratory of Hygiene such material as Dr. H. A. Royster may be willing to make available to the Committee in its collection and collating process on the History of the Medical Society.

2. Report of the accumulated history of medical education in the state.

Dr. Bullitt reported on this by stating that Dr. W. C. Davison had written and published the history of Duke Medical School (25 years 1925-1950); Dr. W. Reece Berryhill is at work on the History for the University of North Carolina Medical School; the History of Dr. Isaac Manning is being developed and much other data is being assembled to round out a good history on the educational background and progress of medicine through the University; and, there are prospects of this history being completed in 1955 so far as the collection and collation of data and material is concerned. Dr. Bullitt reported that Dr. C. C. Carpenter has well advanced the collection, collation and recording of the history of Wake Forest College and the Bowman Gray School of Medicine. The exact status of this is to be determined within the coming year looking to integrating this as a part of the overall Society history. Miss Dorothy Long of the Library of the School of Medicine at the University has written several articles and will be in a position to contribute much data and writings. She is accumulating information of the so-called "abortive schools" of medicine, to wit: schools conceived and operated by individual doctors in the manner of a preceptor system which became more or less formal as schools of medicine. This will include data on the North Carolina Medical College at Charlotte and the school which operated for a time at Davidson College. The Committee authorized an effort to review and collect information on postgraduate instructional work stimulated by the University from 1916 through Dr. Isaac Manning's tenure as Dean of the Medical School at the University. Dr. William P. Richardson is to be asked to work upon the development of this phase of pertinent medical educational history.

3. Data developed during Centennial Celebration 1954.

The data developed by Dr. Hubert Haywood of Raleigh relative to the history of the public health movement was prepared three years ago and an effort will be made to recover such documentation as he had prepared of this phase of history. Dr. Strosnider has this assignment currently for the Committee.

Mr. James T. Barnes will prepare a list of Centennial Celebration items of history discovered in developing the program during 1954 and make these available for the use of the Committee relative to modes of communication and transportation over the years 1850 to 1954.

4. Physical-photographic history as demonstrated in Centennial Celebration of 1951.

The Photographic History of persons prominent in the history of the Society was collected in 1954 and this will be preserved for reproduction in depicting phases of the Society's history.

5. Collection of old books and publications as a background source of stimulation to promote collection of North Carolina Medical History.

The collection of published transactions of the Society appear complete from 1900 to present and there are on file copies for the year 1851, 1879, 1887, and 1898. The Committee recommends that the Headquarters Office endeavor to secure copies of the missing years. The University Medical Library has the most complete library of the earlier transactions. The Committee desired that an effort be made at the county level to locate possible copies of the missing years and during the year communications to the counties will make this effort. A letter is to be prepared by the Chairman to be sent to older or colonial counties in an effort to locate early transactions and early publications which will relate some of the history of medicine in the state.

6. Securing a Catalogue of listable data, objects, personal biographies, etc., by county committees.

The Committee recommended that much be done along this line at the county level and the Chairman is to develop communications to that end. For example, Mr. Shep Strudwick of Hillsboro would have invaluable sources of material if exploited as is evidenced in many other areas of the state.

7. Ultimate considerations as to recording and publishing history.

Duke having published a history, the University perhaps being in the process of publishing and Bowman Gray thought to be in the process the Committee felt that it was not yet sufficiently advanced in the resources of history to make a recommendation at this time.

The Committee makes the considered recommendation that the Society continue the Committee on Archives of Medical Society History which by its title should concern itself for a time longer in locating and enumerating the historical content of medical history before undertaking to conclude a recommendation as to recording and developing the material. It is felt that there is much worthy and interesting information in the story of medicine in North Carolina and that ultimately a history should be written of it.

John W. Winstead, M.D., Chairman,
Greenville
James B. Bullitt, M.D., Chapel Hill
Ernest W. Furgurson, M.D.,
Plymouth
Ivan M. Procter, M.D., Raleigh
Charles F. Strosnider, M.D.,
Goldsboro
[Adopted]

**REPORT OF HOSPITAL SAVING ASSOCIATION
TO HOUSE OF DELEGATES
MEDICAL SOCIETY OF THE STATE
OF NORTH CAROLINA**

E. McG. Hedgpeth, M.D., Medical Director

The 19th Annual Report of Hospital Saving Association to this House of Delegates is a brief summary of continued progress and adjustments to meet economic and social changes. Gains were made as follows:

	1954	Increase over 1953
Blue Cross Participants	483,684	4.01%
Blue Shield Participants	458,156	4.77%
Benefits Paid	\$7,700,297.66	7.59%
Reserve for Unpaid Claims	\$1,104,862.00	35.10%
Total Assets	\$3,156,110.15	16.64%
Legal & Operating Reserve	\$ 973,282.06	1.65%

Including certain cost plus groups and the VA Home Care Program administered for the State Medical Society, the Association actually handled over ten millions in benefit payments during 1954. The Association paid an average of \$89.63 per hospital admission under the comprehensive certificate, and increase of 5.73% over 1953. Part of the continued increase in hospital cost is no doubt due to decreased occupancy in established hospitals brought about by the opening of many new hospitals. The availability of new beds has continued to keep incidence high.

Since the first report to this House of Delegates in 1936, the Association has paid benefits for over one million hospital, surgical, or medical cases totaling just under fifty million dollars. Since late 1954 the Association has been in the process of changing all hospital certificates. These new certificates enable the Association to better meet both the increased cost of services and Blue Cross standards for national enrollment. These certificates place less emphasis upon benefits for "Room" in which the patient has a choice and more emphasis upon heavy expense unpredictable to the patient. The new coverage provides benefits for the first time for congenital defects and prematurity. It covers juvenile dependents to age 19 and is incontestable as to pre-existing conditions after two years. North Carolina citizens and employers have responded well to this coverage. The Association reports good progress in converting membership to these new standards.

It should be emphasized that the Association has continued to do an excellent job in enrollment of rural people. Rural participation has been increased through the Association's regular sales program, without resorting to large artificial groupings which have proven to be an unsound basis for underwriting. In this connection, it is worth noting that in 1954 the Association initiated a program of employing respected members of small communities for sales on a part-time basis and it is gratifying that many physicians have helped the Association locate desirable representatives in towns too small to justify full-time salesmen.

The Association is glad to report that the incidence of usage per member—which had increased sharply in previous years—remained at approximately the same level in 1954 as in 1953. The Physicians Relations Department of the Association has worked closely with several county medical societies to secure their help where local incidence of usage has been markedly high over a long period of time. The response of these county medical societies and their interest in preserving the economic stability of Blue Cross-Blue Shield has demonstrated a fine spirit of mutual cooperation between the medical profession and its voluntary health plan.

The 1954 House of Delegates recommended that the Association work toward the development of a Deductible coverage and permit the sale of the Doctors Program as a Surgical Rider only or with the Medical-Radiology Rider. I am pleased to report that both of these recommendations have been adopted and put into effect. Many lay and professional leaders consider the Deductible feature a sound economic move, and growth of this program will undoubtedly accelerate with public education

and consequent wider acceptance. The Association acknowledges with grateful appreciation the fine work of the Medical Society's Blue Shield Advisory Committee under the Chairmanship of Dr. O. Norris Smith, which has guided the development of this program and which will present results of the Committee's study, with recommendations concerning the future growth and development of the Doctors Program.

Dr. Eben Alexander, Jr., Chairman of the Medical Society's Veterans Affairs Committee, has also demonstrated able leadership in the complex—and sometimes vexing—problems associated with the VA Home Care Program administered by Hospital Saving Association. As a direct result of this committee's work, the Association will continue this program for at least another year, under a revised and increased fee schedule which will go into effect July 1, 1955.

Many matters pertaining to health insurance have been considered by the State Legislature this year and we are particularly indebted to Mr. James T. Barnes, Executive Secretary of the N. C. Medical Society for his cooperation and experienced help with these problems. Also, Mr. Barnes' unfailing courtesy and enthusiasm have been invaluable in developing better liaison between the Association and the members of the State Medical Society.

Respectfully submitted,
E. McG. Hedgpeth, M.D.,
Medical Director
Hospital Saving Association
[Adopted]

APPENDIX I ACTIVITIES OF THE BOWMAN GRAY STUDENT MEDICAL SOCIETY—1954-1955

In the Spring of 1954, a new constitution, combining the local SAMA chapter and the student body organization, was completed. The effect of this constitution as concerned the separate organizations was to make a more unified and a stronger organization which was named the Bowman Gray Student Medical Society.

The objectives of the new medical society are as follows:

- (1.) To provide student government.
- (2.) To facilitate curricular and extra-curricular activities.
- (3.) To maintain a high standard of professional honor among the students.
- (4.) To contribute to the welfare and education of medical students.
- (5.) To integrate with National SAMA.

Officers of the society were elected, advisors appointed, and the following committees appointed: student honor committee, board of publications, athletic committee, social committee, student health committee, publicity committee, program committee, financial committee, curriculum committee, and internship committee.

The activities of the society for the year 1954-55 can best be outlined by taking up the functions of each committee.

The financial committee in cooperation with the Controller's Office (as established in the constitution) has been very successful in collecting dues (\$2.00 per quarter, \$6.00 per year) which were payable at the beginning of each quarter with the tuition. \$1.00 of the dues of each student was sent to the National SAMA office, thus making the student automatically a member of SAMA and eligible to receive the Journal. Due to the efficient functioning of the committee, the society has been financially independent as concerns the numerous activities which will be subsequently listed.

The program committee, the function of which

is to provide programs which contribute to the welfare and education of students, arranged ten programs, given approximately at monthly intervals (the program schedule is given separately at the end). The programs were well-attended, and some were open to the general public.

The publicity committee functioned well in notifying students of all meetings and programs and in notifying the local newspaper concerning activities of general interest.

The student health committee worked in conjunction with the faculty committee on student health.

The social committee arranged two highly successful functions. An informal dance honoring the freshmen was held in the Fall quarter and a formal dance honoring the senior class in the Spring.

The athletic committee managed the school softball and basketball teams, and provided equipment for these teams as well as football and table tennis equipment. This committee also met with the Dean and an architect and aided in the planning of a new student recreation room, which is to be constructed soon. The committee is now investigating the possibility of student honorary memberships at a local country club.

The board of publications managed the publication of the Journal of the Bowman Gray School of Medicine (five issues per annum) and the Gray and White Matter (school annual).

The student honor committee during this year has not been required to function.

The curriculum committee was formed to act as a liaison between the students and the faculty. It is divided into two groups, one representing the

clinical and one the pre-clinical years. Thus far, the committee has submitted two sets of recommendations for curriculum improvements to the faculty curriculum committee. The endeavors of this committee have been appreciated by the faculty, and several changes in the curriculum have been made accordingly. It is our sincere hope that this committee will serve as a ready source of information whenever problems of curriculum arise which require a better faculty-student understanding.

The internship committee was formed to maintain complete internship files for the students. These files consist of all obtainable information from various hospitals, and of questionnaires, which are mailed each Spring to graduates who are in their internship.

As regards the integration of national and local SAMA functions, the Bowman Gray Student Medical Society enlisted an even larger SAMA membership than had been done previously by the local SAMA chapter. In accordance with the new SAMA Life plan, many students were sold SAMA life insurance. A program to explain the purpose of Blue Shield and Blue Cross Insurance was arranged by the program committee and students were urged to participate in the Blue Shield Essay Contest. A delegate to the National SAMA convention in Chicago was elected and his expenses provided by the society.

Other innovations of this year included the utilization of a calendar, with the dates of society activities noted accordingly. This calendar was posted in the library and served in a publicity and planning capacity. Also, a large drawer in the library

SCHEDULE OF PROGRAMS 1954-55

DATE	SUBJECT	PARTICIPANTS
9-19-54	INTERNSHIPS	Dean C. C. Carpenter, moderator Professors of the various depts. Recent medical school graduates: Dr. Frank Greiss Dr. Michael Moore Dr. James Sharp Dr. Joseph Gilbert
10-21-54	PARAPSYCHOLOGY	Introduction: President W. Boyce Dr. David Cayer Speaker: Dr. J. B. Rhine Duke University
11-11-54	SETTING UP OFFICE PRACTICE KEEPING OFFICE RECORDS	Introduction: President W. Boyce Speakers: Dr. Byerly Holt Dr. John Davis Dr. Donald Lomax Mr. Moyer Hendrix, CPA
12- 1-54	STUDENT CPC	Tom Massey Lester Adcock
1-27-55	BLUE SHIELD and BLUE CROSS; LIFE INSURANCE	Introduction: President W. Boyce Speakers: E. B. Crawford, V. Pres. Hosp. Saving Assoc. Dr. H. H. Bradshaw
2- 5-55	HYPNOTISM	Dr. Franz Polgar
3- 7-55	STUDENT CPC	Robert Clark John Taylor Paul Webster
3-28-55	GLYCOGEN STORAGE DISEASE	Introduction: Pres. W. Boyce Dr. Richard Burt Speaker: Dr. Carl F. Cori Nobel prize winner
4-29-55	MOOT COURT-OBSTETRICAL CASE	Wake Forest Law Students Bowman Gray Medical Students Judge, Jury, and Court Attendants chosen from citizens of the city and surrounding district.
5- 2-55	STUDENT CPC	Dan Garfinkle Joe Ward

files was obtained exclusively for the society, and was utilized for filing all papers (including a copy of the constitution, the secretary's record of meetings, and the internship files) pertaining to the society.

Plans which have been entertained by the society, but not yet effected, are the establishment of a committee to work out a student family hospital insurance plan, and the establishment of a program to acquaint high school students with the medical school and with requirements necessary for medical school admission. Plans have been proposed for a student handbook, to be mailed to freshmen just prior to the beginning of the school year.

The executive committee of the Bowman Gray Student Medical Society has summarized the various functions of the society and believes that the year 1954-55 has been a successful one, as evaluated by the achievement of objectives established in the constitution.

Recommendations to the succeeding executive council have been made, in hope that more may be accomplished next year.

RECOMMENDATIONS

The executive committee of the Bowman Gray Student Medical Society (1954-55) makes the following recommendations to the succeeding executive committee:

(1) that society advisors be made honorary members of SAMA. Dues, which include Journal subscription fee, are to be paid by the society.

(2) that a separate minutes book be used each year, at the end of which time, said book will be placed on permanent file.

(3) that an attempt be made to obtain agreement with the faculty to the effect that one appointed student (chairman of the student curriculum committee) be present at all faculty curriculum committee meetings.

(4) that the following committees be authorized under the constitution:

(a) curriculum committee — to consist of three students from each class

(b) internship committee

(c) insurance committee

(5) that the publicity committee chairman shall be in charge of any public relations projects.

Committee on Blood Program

1. During the past year the Blood Program Committee completed its evaluation of a survey concerning needs and available supply of blood for transfusions throughout the state of North Carolina.

2. Two members were added to the original committee which is now composed of Dr. W. H. Christian in Asheville, Dr. Ivan Brown, in Durham, Dr. Tom Wilson in Raleigh, Dr. Bob Prichard in Winston-Salem, Dr. Lee Large, Secretary, in Charlotte, and Dr. Paul Kimmelstiel, Chairman, in Charlotte.

3. It was concluded that improvement of rural blood banks was desirable both in regard to sufficient recruitment of donors and adequacy of technical personnel and supervision.

4. The survey data, analysis, and recommendations for a proposed statewide blood bank system was submitted to the Executive Council (January 1955).

5. With the approval of the Executive Council plans are in process of completion to arrange for a conference with a steering committee to formulate the principle requirements for a successful operation of a statewide blood bank system. It is necessary to solicit the cooperation of the following organizations: North Carolina Hospital Association, North Carolina Medical Schools, American Red Cross, Civil Defense. All of the organizations ap-

proached (Civil Defense has not yet been contacted) have expressed their interest in the project and have appointed delegates for participation in the initial meeting to be held in the near future.

Paul Kimmelstiel, M.D., Chairman
Charlotte
Ivan W. Brown, Jr., M.D., Durham
Thomas B. Wilson, M.D., Raleigh
W. H. Christian, M.D., Asheville
Robert W. Prichard, M.D.,
Winston-Salem
Lee Large, M.D., Secretary
Charlotte

Committee on Blood Program, Dr. Paul Kimmelstiel, Chairman.

Dr. Large, do you want to elaborate on that now?

Dr. Large: Very briefly, Dr. Murphy. I realize the hour is late. However, Mr. Barnes circulated today a brief report which this Committee submitted to the Executive Committee. I believe this group is familiar with what has been going on in the past. There has been a committee composed of representatives of your Committee, the American Red Cross, the Committee of the North Carolina Hospital Association, and the State Department of Health. These met this past month in order to establish some premise for setting up a state-wide system of blood banks which will be controlled, standardized. There were certainly some differences of opinion concerning centralized banks versus localized ones, but these differences were resolved by unanimous agreement.

(1) To establish blood bank centers on a community or district level according to local circumstances and density of population. The present large Red Cross Regional Banks are to continue, however, to function as unit members integrated into the over-all state system, provided their chapters desire to remain in the Regional Red Cross block.

(2) To establish a central clearing office with full time director of a state blood bank system for the specific purpose of, and responsibility for, the maintenance of a standardization of blood bank members, regulation of interchange of blood between units or districts according to needs, professional and technical education and purchase of equipment.

The Committee is now in the process of working out the plan for a blood bank system based on these agreed principles. This plan is to be submitted to the Executive Committee of the State Society. It would, however, be desirable to include in this plan a procedure for the initiation which requires extensive survey of local county conditions. For this reason we respectfully resubmit our recommendations to the Executive Council for approval in principle, specifically for approval to cast tentatively for financial subsidies for the period of initiation. We believe that the Charlotte meeting has given every indication for full support by Hospital Associations, Red Cross, Civil Defense, Medical Schools, and State Department.

We know of four possible sources of funds, which, with the permission of this group, we may begin to approach in order to get subsidies to initiate the survey and to make a more adequate report to the Executive Council. Thank you, sir.

The Speaker: Is there any comment on the Supplementary Report?

Dr. Welton: I move that we accept it and grant them permission to proceed as Dr. Large has suggested.

[The motion was seconded, was put to a vote and carried.]

The Speaker: Report of Committee to revise the Constitution and By-Laws, Dr. R. D. McMillan, Chairman.

Dr. McMillan: Mr. Speaker and Members of the House of Delegates. The Constitution and By-Laws I thought were ready to be codified. We have not made a report, however, because we were waiting to see what we were doing with this question we have just passed the first reading of tonight. However, until after the second meeting of the House of Delegates, the Constitution and By-Laws Committee could not do anything about it.

I do have one that was passed by the Executive Council on motion of Dr. Sams, that the President-Elect of the Medical Society of North Carolina be considered a member ex-officio of the Board of Directors of the Hospital Saving Association with no voting power, and that our four representatives on the Board of Directors of the Hospital Saving Association be elected from the State Medical Society.

It was stated that the Hospital Saving Board has said that there would be no change so far as the Hospital Association is concerned, and that they would change their By-Laws to conform to any request made by the Council in regard to the President-Elect being an ex-officio member, and that his place be taken by a new member representing the Medical Society for the full straight term. It was stated that the Hospital Association agreed to do the same thing as the Medical Society.

The Speaker: Do I hear a motion that we approve this recommended revision in the By-Laws which we can confirm on Wednesday?

Dr. Crump: I move that it be adopted.

[The motion was seconded, was put to a vote and carried.]

The Speaker: We now come to this matter of new business. We have one matter of new business, the Resolution by the Durham-Orange County Medical Society.

Mr. Barnes:

RESOLVED, That Durham-Orange County Medical Society does hereby recommend to the House of Delegates of the North Carolina Medical Society that it propose to the General Assembly that the General Assembly initiate the study of a program designed to take care of the hospital needs of the indigent of North Carolina and that consideration be given to a plan whereby the cost of hospital care to that group be borne by such agencies as are now contributing thereto to the extent of such contributions and the local communities and the State sharing the remainder of the full cost of hospitalization for that group, and the members of the Medical Society shall agree to provide their services free of charge for the hospital care of this group; that the study further encompass a plan whereby the medically indigent, as distinguished from the totally indigent, be encouraged to acquire and pay for a program of hospital and medical services to the extent that they can afford to do so and any costs of hospitalization not so covered be borne in the same manner as the total cost is borne for the totally indigent and the medical costs to the medically indigent to be regulated by the Medical Society; that the amounts contributed by the State be determined on the basis of need, taking into consideration the financial condition of each local community involved, and in the case of the medically indigent he be encouraged to buy voluntary insurance and if he doesn't buy it he would only be helped by subsidy by the amount that he would have been if he had bought insurance.

The Speaker: You have heard this Resolution offered by Durham-Orange County.

Dr. Smith: There is a lot in that. I move that it be referred to a committee for further study and report-back.

[The motion was seconded.]

The Speaker: Is there any discussion of that motion?

Dr. William R. Stanford [Durham County]: I am not a delegate, but I would like to explain that resolution. I think Dr. Smith's idea of referring it to a committee is a very good one, but I know something about this resolution. This was a legally phrased resolution. I know what is back of the whole thing. There is nothing in this resolution, except in the last part of it, that is not already being done. It is simply an effort to let the whole indigent problem in the state be taken care of so that the local community, the state, and any other groups that are paying toward indigent care can pay the full per diem cost of the indigent patient. There is nothing new about it. It is something we are doing. The idea back of it is to keep these hospitals that are being built from going in the hole.

The idea further is that the second group be encouraged to buy voluntary hospital insurance in the amount that they can afford, with a premium that this group can afford, so that they would get as much coverage as that insurance would allow. I remind you again that this group is just above this low income group, the indigent group. It is what we call the medically indigent. They would get voluntary insurance and they would pay as much of that hospital bill as they could and then after they left the hospital the rest of that hospital bill would be subsidized.

Those are the two groups that are giving us difficulty. They are the groups that we have not gotten the answer to.

As I say, I am not a delegate, but I think it would be very wise to refer this to a committee to be given thorough consideration, and then if the House of Delegates next year feels that they want to take it to legislation, that is where it would have to be done, and they could go ahead with it.

I apologize to you for talking about this, but I wanted you to understand what is back of it.

[The motion was put to a vote and carried.]

The Speaker: The Chair has no further new business to offer. Is there other new or unfinished business arising from the floor? If not, the meeting is adjourned, and the House will reconvene in the Small Card Room at two o'clock on Wednesday afternoon. Thank you for your patience.

[The meeting adjourned at eleven twenty-five o'clock.]

WEDNESDAY AFTERNOON SESSION

May 4, 1955

The Second Meeting of the House of Delegates convened in the Small Card Room of The Carolina, at two-thirty o'clock, Dr. Murphy, Speaker of the House, presiding.

The Speaker: Ladies and Gentlemen: The Second Meeting of the House of Delegates for the Annual Session of 1955 will come to order.

We will take up the normal procedure of business, and under unfinished business our agenda provides for a report from the Nominating Committee, Dr. Holmes making the report for the Nominating Committee.

Dr. George W. Holmes:

The Nominating Committee of the Medical Society for the State of North Carolina met on the night of May 2, 1955, under the chairmanship of Dr. Claude Squires. All members of the Nominating Committee were present.

Dr. Thurston moved and it was duly seconded and unanimously voted that a request be made to the Executive Council that accommodations be made available at the place of meeting for Saturday night prior to the meeting for members of the Nominating Committee.

Dr. Claude Squires moved that it was duly seconded and unanimously voted that the Executive Council be requested to have the installation of the incoming officers of the Society at the President's Dinner on Tuesday night of the Meeting rather than at the close of the session on Wednesday.

Dr. John Payne moved and it was duly seconded and unanimously voted that recommendation be made to the Executive Council that the report of the Nominating Committee be given at the Tuesday afternoon session of the meeting rather than at the final meeting of the House of Delegates on Wednesday.

Dr. John Payne moved and it was duly seconded and unanimously voted that the policy of consulting the incoming President as to his choice of First and Second Vice Presidents be continued.

Dr. Thurston moved and it was duly seconded and unanimously voted that recommendation be made to the Executive Council that the expenses of delegates and alternates to the meeting of the American Medical Association be paid by the Medical Society of the State of North Carolina.

The Committee reported the following slate of officers: Dr. Donald Koonce for President-Elect of the Medical Society of the State of North Carolina. Dr. Edward W. Schoenheit for First Vice President. Dr. Milton Clark for the office of Second Vice President. Dr. Millard Hill for Constitutional Secretary and Treasurer.

For Speaker of the House of Delegates: Dr. Westbrook Murphy.

For Vice Speaker of the House of Delegates: Dr. Lenox Baker.

For Delegates to the American Medical Association: Dr. Millard D. Hill, Dr. Elias Faison, and Dr. Charles F. Strosnider.

For Alternate Delegates to the American Medical Association: Dr. Joseph F. McGowan, Dr. William Nicholson and Dr. Ernest Craig.

For Members of the State Board of Health: Dr. Grady Dixon and Dr. G. Curtis Crump.

The following as Councilors and Vice Councilors of the various districts.

First District

Councilor—Dr. T. P. Brinn

Vice Councilor—Dr. Quinton E. Cooke

Second District

Councilor—Dr. F. C. Brooks

Vice Councilor—Dr. F. M. Simmons Patterson

Third District

Councilor—Dr. Dewey H. Bridger

Vice Councilor—Dr. W. A. Greene

Fourth District

Councilor—Dr. Henderson Irwin

Vice Councilor—Dr. Ernest L. Strickland

Fifth District

Councilor—Dr. Ralph Garrison

Vice Councilor—Dr. Louten R. Hedgpeth

Sixth District

Councilor—Dr. George W. Paschal, Jr.

Vice Councilor—Dr. Rives W. Taylor

Seventh District

Councilor—Dr. Leslie Morris

Vice Councilor—Dr. James F. Reinhardt

Eighth District

Councilor—Dr. Merle D. Bonner

Vice Councilor—Dr. Harry L. Johnson

Ninth District

Councilor—Dr. John Reece

Vice Councilor—Dr. Frank W. Jones

Tenth District

Councilor—Dr. Wm. A. Sams

Vice Councilor—Dr. Bernice E. Morgan

The Nominating Committee recommends that the 1956 session of the Medical Society of the State of North Carolina be held at the Carolina Hotel in Pinehurst, North Carolina, subject to the approval of the Executive Council and the Carolina Hotel.

The hotel and convention facilities of Myrtle Beach, South Carolina, Carolina Beach, N. C., and Asheville, N. C. have been proffered to the North Carolina State Medical Society.

Respectfully submitted,

Claude B. Squires, M. D., Chairman

George W. Holmes, M.D., Secretary

The Speaker: I heard my name listed, and I was about to ask Dr. Lenox Baker if he were here to take the Chair, but his name is on the list, too, so I think if I hear no objection, may I have the privilege of asking the Constitutional Secretary to take the Chair to finish the conduct of this election.

[Dr. Hill assumed the Chair.]

Chairman Hill: Do I hear any nominations from the floor?

Dr. Roscoe McMillan: I move that nominations be closed.

[The motion was seconded.]

Dr. McMillan: I move we accept the report of the Nominating Committee.

[The motion was seconded.]

Chairman Hill: All in favor of accepting the slate as read by the Secretary of the Nominating Committee, Dr. George Holmes, say "aye"; all opposed say "no." The ayes have it and it is carried unanimously.

[Dr. Murphy resumed the Chair.]

The Speaker: Secondly we come to the item of the ratification of changes in the By-Laws, which were forwarded from the first session. I will ask the Chairman of the Committee on Constitution and By-Laws to report.

Dr. McMillan: Mr. Speaker, I present for your consideration the second reading of the following:

That the President-Elect of the State Medical Society of North Carolina be considered a member ex-officio of the Board of Directors of the Hospital Saving Association with no voting power, and that our four representatives on the Board of Directors of the Hospital Saving Association be elected from the State Medical Society.

(It was stated that the Hospital Saving Board think that that should be changed so far as the Hospital Association is concerned, and that they will change their By-Laws to conform to any request made by the Council in regard to the President-Elect being an ex-officio member, and that his place be taken by a new member representing the Medical Society for the full straight term. It was stated that the Hospital Association agreed to do the same thing as the Medical Society.)

Dr. Sams: I move the adoption of the report.

[The motion was seconded by Dr. Dixon.]

The Speaker: Is there any discussion? If not, all in favor say "aye"; opposed, "no." That amendment is adopted on the second reading.

Dr. McMillan, I believe you have other amendments.

Dr. McMillan: Mr. Speaker, with regard to the motion by Dr. Paul Whitaker. I don't have that motion before me, but it will require a change in the By-Laws to do this. I move that Dr. Whitaker's motion be accepted. [There was discussion as to identity of the motion.]

The Speaker: We will proceed. Dr. McMillan has made the motion that the amendment on membership as proposed by the Special Committee and con-

firmed by Dr. McMillan as Chairman of the Committee on Constitution and By-Laws and passed on it first reading now be passed on its second reading. Is there a second to Dr. McMillan's motion?

[The motion was seconded by several.]

The Speaker: Is there any discussion of that? All in favor say "aye"; opposed, "no." That one carried, with one opposing vote. Thank you so much.

Dr. London: In line with the action which has just been taken, I would like to propose this action by this body: that the Secretary be requested to notify the component county societies who admit Negroes to change their by-laws to conform to the State Society regulation on Negro membership and notify them that only under this type membership may Negro physicians be admitted to the State Society.

[The motion was seconded by Dr. Crump.]

The Speaker: Is there any discussion? Do you understand the motion?

[The motion was reread.]

Dr. London: You will notice this says, "who admit Negroes,"—under this you do not have to admit them, you are not required to admit them. Your admission to this Society is through the component county society.

Dr. Brinn: Is there to be a time limit under which they may change their constitution and by-laws?

The Speaker: The motion makes none.

Dr. Dixon: There is no "must" in that motion.

Dr. Faison: Mr. Chairman, I would like to amend that motion to the effect that no action be taken concerning this matter until the Executive Council meets.

[The motion was seconded.] [Discussion ensued.]

The Speaker: Is there any further discussion on Dr. Faison's substitute motion? Dr. Faison moved, and it was seconded, that action on this resolution be deferred until the next regular meeting of the Executive Council. All in favor of Dr. Faison's motion say "aye"; opposed, "no." The motion is lost.

We will now return to the motion which was duly made and seconded, that this resolution as offered by Dr. London be passed. Is there any discussion before the vote is put? All in favor say "aye"; opposed, "no." The motion is carried.

Dr. Lawrence: Mr. Speaker, I would like, if I may, to address a very few and brief remarks to this House of Delegates and then to propose a resolution which I believe with all my heart may help obviate a lot of the rough places that may lie ahead of us.

When I came into this room, I was not aware of the fact that my distinguished friend, Elias Faison, and my beloved friend here from the same county might differ about a little point of that sort, but that certainly illustrates forcibly and to the point, Dr. McMillan, the reason, as I see it, for some further effort toward clarifying the road that we must travel under this new resolution. Please do not understand that I am in the slightest disposed to upset the action that has just been taken. I have always been willing to accept the inevitable. I have been early to recognize when I was on a losing side, and I have been there many times, as I was the other night, and that was one reason I didn't press the debate any further at that time.

There were many things that could have been said about that, as all of us could agree. There may be many things to be said now. Many of us believe that you cannot change the leopard's spots. You may catch him, you may pull his teeth, you may shave him from his nose to his tail, and you may dip him in a barrel of tar if you please and make him as black as a Negro, but when it wears off,

when his hair grows out, the spots are still in the same place.

So, just as surely as the sun rises in the east in the morning and sets in the west in the afternoon, these brethren are still Negroes. They will press this action to the last point.

I share the view with my colleagues who feared honestly that under the recent ruling of the Supreme Court, though it was not a ruling, in my opinion, of a learned court—and, as was stated the other day, not a single member of that court ever sat on any bench prior to this time, and I think they made an unwise decision. The State of North Carolina thought so, and therefore they sent their attorney-general and his corps of assistants to Washington at much expense. They made a masterly presentation to that court, I am told, but the decision is the same nevertheless.

I want to pay tribute to my friend, Ben Royal, Dr. McMillan who worked with them, Dr. Brewer and Dr. Whitaker, for their efforts. I think they are just as honest as men get to be. They are wiser than I am, and they are wiser than most men. But I think they made a mistake. I have been outvoted, and I accept that as a fact.

We are going to take Negroes into this State Medical Society, gentlemen, and with them will come their wives. We have already heard the discussion that Mecklenburg would like, if it pleases, to take them carte blanche. There may be other county societies, I believe there are, who would like to take them. That is merely corroborating what I think is the reason for the resolution I hope to offer.

I believe that the State Medical Society as we have known it in the past has had the first dagger put through its heart and that it is now in the quivering process of its demise. But I believe the organization will have to live on under difficulties, if you please, and I certainly would want it to live on, Dr. McMillan.

Dr. McMillan: Me, too!

Dr. Lawrence: I am making a motion that our new president be instructed to appoint such a study committee of three or five to take up a study, a consideration, if you please, of ways and means, and perhaps and/or the feasibility of the formation of some other organization that would work exactly as the present North Carolina State Medical Society now functions.

[The motion was seconded.]

The Speaker: It is now open for discussion.

Dr. McMillan: Mr. Speaker, I talked to Ben Lawrence a long time this morning. I talked to one other man last night. I believe these two fellows have got something, and it would give me a great deal of pleasure to second Dr. Lawrence's motion.

Dr. Royal: I have no discussion, but a confession. The committee that was responsible for throwing this fat in the fire at this particular time realizes full well that they didn't settle a single thing when they made this recommendation, but in view of the light before us, we thought that it was a place to start and a way to start. We thought at that time—and I have discussed it with more than half a dozen folks in this room, and some such path had been suggested—that perhaps it could be worked out. I certainly would like to give it my wholehearted support.

The Speaker: Dr. Ben Royal, who is a member of the Committee, has spoken in support of Dr. Lawrence's motion. May I say, if it were not improper for the presiding officer to do so, I also would second that motion. Is there any further discussion now? All in favor say "aye"; opposed, "no." The motion is carried.

The Speaker: We will call on the committee that

was to report on the two presidential messages, of which Dr. Julian Moore was Chairman. I understand that he has gone and that Dr. Paschal will report for that committee.

Dr. Paschal:

Mr. Speaker, your committee appointed to report on the address of the President to the House of Delegates wishes to make the following report:

Presidents Owens has made eleven concrete recommendations to the Society.

We believe these recommendations are reasonable and are for the best interests of the Society.

We therefore report to the House of Delegates that they should be approved and followed by the House of Delegates and the Executive Council.

[Signed] Julian A. Moore, Chairman
George W. Paschal, Jr.
T. P. Brinn

Dr. Sams: I move the adoption of the report.

[The motion was seconded.]

The Speaker: Is there any discussion?

[The motion was put to a vote and carried.]

The Speaker: That finishes our formal agenda.

Dr. O. N. Smith:

Resolved, That the House of Delegates express strong opposition to any state tax on Blue Cross-Blue Shield dues, which would further impede more universal prepayment health insurance of our people.

[The motion was seconded.]

The Speaker: Is there any discussion?

[The motion was put to a vote and carried.]

The Speaker: We are ready now for further new business.

Dr. Owens: Gentlemen of the House of Delegates, not as your President, but as a member of the House of Delegates, I would like to propose and nominate those two gentlemen, Dr. George F. Lull and Dr. J. Grafton Love for honorary membership.

Dr. Sams: Mr. Speaker, as a member of the House of Delegates, since Dr. Owens is President, I would like to make a motion that both Dr. Lull and Dr. Grafton Love be named honorary members.

[The motion was seconded.]

The Speaker: The Chair takes the liberty of interpreting this motion to mean that the proposal of these two distinguished gentlemen for honorary membership be referred to the Executive Council. Is there any further discussion?

[The motion was put to a vote and carried.]

The Speaker: Is there any further new business to come up from the floor?

Dr. Sams: Mr. President, I would like to move that the House of Delegates of the State Medical Society of North Carolina adopt a firm belief that every member of the State Medical Society of North Carolina, when he dispenses or gives a dose of polio vaccine, will not give it unless the person who has the vaccine can give an authentic reason or place where he purchased it and got possession of it. I think we ought to protect the market and our children that much and that this be given the widest publicity in the daily press?

[The motion was seconded.]

The Speaker: All in favor say, "aye"; any opposed, "no." The motion is carried.

Dr. Brewer: Mr. Speaker, I want to get around to the dues business. First of all, I wish to say that it was not the intention of the committee on the Negro problem, it was not our thinking that there would be any wholesale welcome to Negroes into the Medical Society of the State of North Carolina.

In what I am about to say, Dr. McMillan will correct me if I am wrong because he is an authority on the Constitution and By-Laws. Just like any other physician, the Negro physician will have to apply to his local county medical society. You men

that live with him and know him are the judges of his qualifications for membership. When and if one applies, it is your duty to investigate him carefully, and I think, and I believe my committee thinks, that he should be seen and talked with, and this thing should be explained to him. He should have a thorough understanding of the terms and conditions under which he is accepted into membership. Then if he is found qualified and he is willing to accept membership on the terms which are offered him, I think you can take him in. If he is unwilling, or if he is unqualified, of course do not accept him for membership.

Of course, if you refuse him for membership, like any other physician, he will have the privilege of appealing to the State Medical Society, and you know and I know that this House of Delegates would substantiate and approve and back up the action of any county medical society that refused a Negro Membership.

Talking yesterday to the Executive Secretary of the Florida State Medical Association he said in the three years since 1952 they had taken in 25 in the State of Florida, and that in each instance they had come in and had listened to the papers, looked at the lantern slides as they were shown, and when the scientific sessions were over, they left. They understood the terms and conditions under which they had come in, and they were abiding by them.

It is our hope and it is our thought, it is the pledge of the Negro leaders of the old North State Medical Society to your Committee that the Negro physicians of North Carolina will abide by those conditions. You heard those fellows make their promise to us.

They also said to us that if any county society was considering the admission of a Negro physician and they were not quite certain about him, if they would write to the Executive Officers of the Old North State Medical Society, they would be glad to tell the local society what they thought about him and whether they thought he was emotionally mature enough in his thinking and in his character and so forth, to become a member of the local county medical society.

Dr. McMillan: They asked that all of them be screened.

Dr. Brewer: They will screen all of them. I don't want any county society to go back, any group to go back home and feel that it is the thinking of this committee that you have got to take in every Negro that applies. There are some white physicians that don't get into the Medical Society.

Since it appears that they are not to participate in all the activities of this Society, I move that the House of Delegates refer to the Executive Council and advise them to consider and to set up some differential in fees to be charged Negro physicians, and that they pass that on to the local county societies. It is my hope that no county society will take in any of these members, even though they may apply, until the Executive Council has met and set up some schedule of fees, whatever they might be, and advises the local county medical societies.

[The motion was seconded.]

The Speaker: Is there any discussion?

[The motion was put to a vote and carried.]

The Speaker: Is there any further new business arising from the floor?

Dr. Henderson Irwin: I would like to move this Committee be given a vote of thanks by the House of Delegates for all the efforts that they have put forth.

[The motion was seconded.]

The Speaker: It is moved that the House of Delegates give a vote of thanks to the gentlemen. Is there discussion?

[The motion was put to a vote and carried.] [Applause.]

The Speaker: Is there further new business arising from the floor?

Dr. McMurry: I would like to ask our By-Laws Chairman, if our colored brethren renege on their pledges to attempt to do this smoothly and not to force themselves into the social end of this affair, in order to rescind what we voted for, this would have to be done, say, the following year by another revision of the By-Laws—is that correct? Can you censure the members who don't act as their own members have agreed to?

Dr. McMillan: That would have to be handled on a local level to start with, but I am in hopes that your Committee on By-Laws will take care of that part of it for you. I hope we can. I mean in writing into the By-Laws what they are supposed to do. Does that answer your question?

Dr. Furgurson: I was born and raised in North Carolina, so I am not a Yankee, as all of you know. Dr. Lawrence and I have possibly differed a little in our opinions at times, and I am sure I respect his and he respects mine. But if you set up a separate North Carolina Assembly, or whatever you set up—we have been batting this thing back and forth for five years—actually I think that is going to make a real mountain out of a molehill, if you want to put it that way, because all of your newspapers, your public, your patients, and everyone else, are going to know that you are trying to sidetrack this issue. It is nothing but that. If the Carolina Hotel does not accept them—and that I understand is their policy—I see no reason why we should not set up adequate scientific meetings in some of the churches, in some of the other places, as we already do, and invite them to join in with those meetings and explain to them that we have no facilities anywhere in the state except at Pinehurst to meet at this time, and until the time arrives, we cannot do anything more than that. It seems to me that that would be a much better solution than trying to set up an entirely different state medical society under another name. To me, that is just a complicating factor which is going to get us into nothing but trouble.

Dr. Sams: That is well said.

The Speaker: The Chair may reasonably anticipate that that matter will be debated at the next annual session, and I warn you now that when it is we will have a poll vote, so just be set for it.

That will be received as a recommendation and advice to the committee which will be created. Is there further business arising from the floor?

Dr. Irwin: I would like for the House of Delegates to go on record as advising that each member of the State Medical Society make himself available to the Superintendent of Education of his county to make a talk in some one high school building.

The Speaker: Dr. Irwin moved that the House of Delegates inform the members that it urges its members to make such addresses as are possible to inform the public on two controversial subjects, poliomyelitis and cancer. That is a statement of policy. It probably is not controversial. The motion has been seconded.

[The motion was put to a vote and carried.]

The Speaker: Is there any further new business.

Dr. Sams: I move that we adjourn.

[The motion was seconded, was put to a vote and carried, and the meeting adjourned at three forty-five o'clock.]

APPENDIX II

Analysis of Legislation Proposed by the North Carolina Citizen's Committee on the Coroners System for Consideration of the General Assembly of 1955

by

Wiley D. Forbus, Chairman of the Citizen's Committee on the Coroners System

I. Title of Proposed Bill—A Bill to be Entitled an Act to Revise the Laws of North Carolina with Respect to Postmortem Medicolegal Examinations.

A. Postmortem medicolegal examinations refer to all medical procedures required to determine the cause of death. An autopsy is only one of such procedures; its use in a given case depends upon the outcome of other medicolegal examinations which always precede it. Only a small proportion of medicolegal deaths require autopsy.

II. Objective of the Proposed Bill

A. The main objective of this bill is to provide for the law enforcement and health agencies medically competent assistance in determining the cause of death in cases where death of an individual is a matter of public concern. These deaths fall within a limited category specifically defined in the bill. The bill does not concern itself with any other form of death.

III. The Essential Provisions of the Proposed Bill

A. State level organization and functions.

1. A Medical Examiners system is set up as a division of the State Health Department.
2. Administrative authority is placed in a Committee of seven members as follows: 1—State Health Officer, 2—the Attorney General, 3—Head of the State Bureau of Investigation, 4—Head of the Department of Pathology of the University of North Carolina School of Medicine, 5—Head of the Department of Pathology of the Bowman Gray School of Medicine, 6—Head of the Department of Pathology of Duke University School of Medicine, and 7—a layman appointed by the Governor. This Committee acts as an advisor to the State Board of Health through the State Health Officer who is the administrative head of the system.
3. The State Health Officer with the approval of the Advisory Committee, and on nomination of the County Board of Commissioners, appoints for each county a Medical Examiner who must be a qualified, practicing physician in the community for which he is appointed.
4. The State Health Officer, with the approval of the Advisory Committee, divides the state into a number of districts and appoints a qualified pathologist to serve each district.
5. The State Health Officer maintains the permanent records of the system.
6. The State Board of Health is authorized to establish and maintain a toxicological laboratory or if it so chooses to contract for toxicological service necessary to the operation of the system.

B. County level organizations and functions.

1. The County Medical Examiner is assigned responsibility for all medicolegal examinations. He is provided with authority to order an autopsy in a case only when in his opinion the cause of death cannot be determined otherwise.

2. The County Medical Examiner is required to make written reports of his findings to the following: the Coroner, the Solicitor of his district, the State Health Officer. Upon request, a copy of the Medical Examiner's report may be furnished to the head of the law enforcement agency charged with the responsibility for the investigation of the incident.
3. The District Pathologist performs autopsies and makes other pathological examinations ordered by the County Medical Examiner, and reports his findings in writing to the following: The County Medical Examiner, the State Health Officer, the Solicitor, and the Coroner.
4. The County Medical Examiner authorizes cremation through the issuance of a permit in each case.
5. The County Medical Examiner initiates proceedings for the disinterment of bodies of persons where circumstances surrounding the death require medicolegal investigation. Disinterments are authorized by the court.
6. Embalming the bodies of persons who have died under circumstances requiring medicolegal examination before such examination is made is specifically prohibited.
7. County Medical Examiners and District Pathologists cooperate with the Coroner and other law enforcement agencies in their legal investigations but have no responsibility for such investigations. Primary control of the dead body in cases falling within the provisions of this bill is vested in the County Medical Examiner representing the State Health Officer and his Advisory Committee, until the cause of death is determined or the body is released by the County Medical Examiner.

C. Fiscal provisions.

1. State level.
 - a. Members of the Advisory Committee who are state employees receive no salary but do receive travel expenses incident to service on the committee the latter being paid by the agency by which the member is employed. Members not regularly employed by the state receive ten dollars per day plus travel expenses, paid from Health Department appropriations.
 - b. The State Health Department maintains the records of the system with its own funds.
 - c. The State Health Department is authorized to maintain facilities for toxicologic service; financing of this service to be worked out by the State Board of Health. A toxicologic service is now supplied by the State Bureau of Investigation through funds allocated to this Bureau. Through cooperation between the Health Department and the State Bureau of Investigation, it is not anticipated that any new financing for toxicologic service required by this bill will be necessary.
2. County level.
 - a. County Medical Examiners and the District Pathologists are paid on the basis of a fee for service, the fee to be determined by the County Commissioners in consultation with the State Health Officer and his Advisory Committee and paid by the county for which the service is rendered.
 - b. Costs of autopsies and other pathological examinations are assigned to the county of residence of the deceased except in those cases in which legal residence cannot be determined. In such cases, costs are assigned to the county in which the remains were found.

GENERAL SESSIONS

FIRST GENERAL SESSION

Tuesday Morning, May 3, 1955

The first General Session convened in the Ballroom at nine-twenty o'clock, being called to order by Dr. Millard D. Hill, Chairman of the Committee on Arrangements.

Dr. Adam W. Craig, of the Episcopal Church, Pinehurst, gave the invocation.

The Reverend Adam W. Craig: Almighty God, Our Father, we pray that men who must often act themselves almost as gods may always know Thee, the true God. Give them to know that Thou art to be found in Jesus Christ, our Lord, and in the service of His church. Hold before them Thy new commandment of love, and, in discipleship to the Lord of all healing and love, may they find strength and wisdom and peace.

We thank Thee for the great advances in medicine that have come this past year. We thank Thee for the steady advance of the work in this state. We ask Thy blessing upon every life here, and we pray that this convention may be important in the history of the Kingdom of God. In Jesus' name we pray. Amen.

Chairman Hill: We have a communication to give you at this time.

"It is with reluctance that I have to inform you

that it will be impossible for me to attend the annual convention of the North Carolina State Medical Society. I have looked forward with pleasurable anticipation to this meeting, but I am scheduled to deliver an address before the American Pharmaceutical Association in Miami."

"Please express to my many friends in the Society my regrets. Thank you for the many courtesies you and the Society have extended to me. Cordially yours, F. E. Wilson, M.D., Director Washington Office, American Medical Association."

I take pleasure in introducing to you your President, Dr. Zack D. Owens, of Elizabeth City, who has probably done more traveling this year while President of the State Medical Society than any other president. He has attended many meeting in the state, seven out-of-state meetings, and has traveled somewhere around 25,000 miles by air and by car in the interest of organized medicine in the past twelve months. It is now my pleasure to introduce to you your President, Dr. Zack D. Owens, of Elizabeth City.

President Owens: Thank you, Dr. Hill.

At this time I would like to introduce and present a distinguished guest. He is Director in Chief of the Neurosurgical Department of Mayo Clinic. He is a North Carolinian by birth, and he is still

a North Carolinian even though he has migrated to the Mayo Clinic in Minnesota. It is a happy privilege to present Dr. J. Grafton Love. Dr. Love, please stand and be recognized. [Applause] Gentlemen, you will hear from him later on this morning on the program.

We will proceed now with our program. First is the report of the Committee on Scientific Awards by Dr. Roland T. Bellows, of the Committee on Scientific Awards. [Applause]

Dr. Roland T. Bellows: President Owens, Secretary Hill, Members of the Medical Society of the State of North Carolina, Distinguished Guests: I have the honor to present the annual awards. As has become customary, three prizes are to be awarded for excellence of presentation of material in one form or another at last year's annual meeting.

The Moore County Medal has been presented annually for twenty-eight years for the outstanding thesis presented in the scientific sessions. The manuscripts are judged on the basis of originality and scientific value, degree of interest, and on their literary merit.

In the Committee's opinion, the paper which ranked highest last year was presented in the Section of Pathology, entitled "Statistical Review of 22,000 Cases Examined by Cervical Smears." As its title indicates, it is a highly integrated and detailed statistical analysis of a large number of cervical smear examinations in relation to subsequent tissue examinations. In this day of statistics and mass figures, this statistical review may be epitomized by stating that it costs \$325 to diagnose each case of carcinoma of the cervix by this method. This article was published in the North Carolina Medical Journal for November, 1954. The authors of this article are Dr. Paul Kimmelstiel, Dr. Roland T. Pixley, and Dr. John Crawford from the Charlotte Memorial Hospital, Charlotte.

I believe that Dr. Crawford is here to receive the award. Dr. Crawford, in behalf of the Fellows of the Moore County Medical Society, I have the honor to present to you and your colleagues, this medal. Congratulations. [Applause]

There is an increasing wealth of material presented each year by audio-visual means. To stimulate this and to reward those whose efforts are outstanding, a few years ago the Fellows of the Gaston County Medical Society established an annual prize to be awarded. This is for scientific material presented in the form of lantern slides, motion picture film, exhibits, clinics and television. The members of this committee and the consultants who aided in appraising this material believe that the outstanding presentation of this type made at last year's annual meeting was an exhibit, the title of which was "Biocolloids of Urine in Health and in Calculous Disease." This exhibit portrayed the isolation and identification of tremendously large protein molecules in urine in calculous disease. The theory was proposed that this large protein molecule provides a matrix from which urinary stones are built. This was original investigative work, and it is important especially to our whole profession in this well-known stone-forming area in which we live.

An article by the authors touching on this exhibit was published in the Journal of Clinical Investigation for October 1954. The great protein molecule identified has been photographed with the electron microscope and was reproduced in the Journal of Biological Chemistry for February, 1955.

The creators were Dr. William H. Boyce, Dr. Fred K. Garvey, and Dr. Charles M. Norfleet, of the Department of Urology of Bowman Gray School

of Medicine. Dr. Charles Norfleet will accept the award.

Dr. Norfleet, in behalf of the Fellows of the Gaston County Medical Society, I have the honor to present to you and your colleagues this medal. [Applause]

Another member of the Scientific Awards Committee, Dr. William S. Doshier, of Wilmington, will present the next award.

Dr. William S. Doshier: Mr. President, Members of the Medical Society and Guests: I have the honor to present the Cooper Memorial Award, which is given by the Fellows of the Wake County Medical Society in honor of the long service rendered to public health in North Carolina by Dr. George Marion Cooper.

In reviewing these papers, the Committee decided that the paper on "Obstetric Analgesia and Anesthesia" by Dr. Richard Pearse, Dr. Eleanor Easley, and Dr. Kenneth Podger, of Durham, merited the award for this year. This article was published in the North Carolina Medical Journal in January, 1955. These authors have presented, in our opinion, a very excellent paper which is of particular scientific interest in that it stresses the intelligent use of anesthesia and analgesia in obstetrics rather than the idea of snowing them under so that the woman in childbirth will have no knowledge of her labor and delivery, as has been practiced in the past and is being practiced to a certain extent in this country. They have stressed the intelligent use of these drugs in childbirth, feeling that by so doing the life of many infants can be saved and that the mothers will at the same time be able to approach labor with a great deal of rationalization and really be able to get a great deal of enjoyment out of the experience of childbirth. I don't believe these people are followers of Dick Reed particularly, but they lean over to that side of the fence.

I thought it would be appropriate to review for just a few minutes the life of Dr. Cooper as he has contributed so much in North Carolina to maternal and child welfare.

Dr. George Marion Cooper was born in 1876 and he died in December, 1950. He was graduated in medicine at the University College of Medicine in Virginia in 1905, and began his private practice in Clinton shortly after graduation. There he practiced for eight years.

In about 1912 he entered public health work for the State of North Carolina and continued in public health work the rest of his life, contributing about thirty-five years of his life to this service, during which time he served in many capacities in the state health organization. At times he was Acting State Health Officer, and for a long time Assistant State Health Officer.

I doubt if there are many doctors in North Carolina who have contributed as much as Dr. Cooper has to the uplift of child welfare, maternal welfare, and public health in general.

I believe that his life work is epitomized very well in the letter written by Governor Kerr Scott on the announcement of his death:

"In the death of Dr. George Marion Cooper, Assistant State Health Officer, North Carolina has lost a faithful public official and humanity a devoted friend. He was interested in and gave his efforts to the solution of more public health problems than any other man of his generation. Although he was qualified for leadership in any phase of public health work, he was willing to serve in the ranks. However, he was looked to for advice and guidance by every State Health Officer and every other Health Official with whom he worked.

"Dr. Cooper was able to place himself alongside

those he served; to interpret their problems and minister to their needs in a sympathetic and effective manner. He was able to serve his State over a period of many years without assuming any attitude of proprietorship. On the contrary, he remained a faithful servant of the people. He occupied a place in North Carolina history which was unique. In his relationship to Church and State, Dr. Cooper gave his best."

Dr. Cooper was honored by many national organizations for his work, and in many of these he served his State nobly and well.

Dr. Pearce, will you come forward and receive this medal. Dr. Pearce, it is my honor to present you with this medal, the George Marion Cooper Award, given by the Fellows of the Wake County Medical Society, which we feel you so richly deserve.

I assure you that it is through no collusion on my part that you get this medal, because there were surgeons and medical men beside obstetricians on this Committee. I congratulate you most heartily.

President Owens: Fellows, these scientific awards are so important. Let's give all the recipients a big hand. [Applause]

No one realizes the amount of work that Dr. Bellows especially and his Committee in general have given to reviewing and studying the Scientific Awards. I think they should also have a big hand. They have done a great service for our Society. [Applause]

The next item on the agenda is "Recognition of Pulmonary Embolism," by Dr. Hugh H. Hussey, Associate Professor of Medicine, Georgetown University, Washington. This comes from the Section on Practice of Medicine and Surgery. It is a great pleasure to have Dr. Hussey with us.

[Dr. Hugh H. Hussey's essay of his presentation before the First General Session will appear in a subsequent issue of the North Carolina Medical Journal.]

President Owens: Thank you very much, Dr. Hussey.

Gentlemen, when I introduced our distinguished guests, I did not see Dr. Hussey and the other men who appear on the program in the audience. They are all our distinguished guests. It is an honor and a tribute that the Medical Society of North Carolina pays to these distinguished gentlemen when they extend them an invitation to appear on our Scientific Program of the General Sessions. They have all done outstanding work in their field, the advancement of scientific medicine.

At this time I would like to present the next speaker and ask Dr. George Paschal, Vice President, to come forward and take the chair. The next subject is "Differential Diagnosis of Jaundice" by Dr. David Cayer of the Bowman Gray School of Medicine, Winston-Salem, North Carolina. It comes to us from the Section on Practice of Medicine. Dr. Cayer!

[Dr. Cayer presented his prepared address.]

Chairman Paschal: Ladies and gentlemen, we have heard an informative and instructive discussion of a very important, everyday problem. I wish to compliment the speaker and thank him.

The next part of the program is given to another everyday problem that has excited the country as a whole, has interested every parent, and is one of vital interest to all of us. We have today had word that Dr. Hart E. Van Riper, who was to discuss this problem, cannot be with us, due to the necessity of his presence in attendance on discussions concerning the Salk vaccine at a national level. We are fortunate to have with us at this time a gentleman from the National Foundation for Infantile Paralysis, Dr. Kenneth Lane.

[Dr. Kenneth Lane, in substituting for Dr. Van Riper, presented a lecture based on a series of slides related to the Francis Report and the Salk Report on Poliomyelitis Vaccine. An essay in documentary form is not available for publication.]

Chairman Paschal: Ladies and gentlemen, I wish to thank Dr. Lane for being here, and for his report.

The next item on the program has by necessity been cancelled due to the fact that our speaker, the President of the American Medical Association, Dr. Walter B. Martin, of Norfolk, Va. is unable to be here at this time. However, while we are losing by not hearing Dr. Martin, a gentleman of national prominence, our next speaker is one of national and international stature. He is a native of North Carolina, coming from his present situation in Rochester, Minnesota, as head of the Neuro-Surgical Department there at the Mayo Clinic, by way of Elizabeth City, Wake Forest College, the University of Pennsylvania, Chestnut Hill Hospital, and the Mayo Clinic.

It is a particular regret of our President that he is not here to introduce our speaker since the two of them grew up together, in Elizabeth City. He wanted you to know that Dr. Love is his particular friend, and I believe it is through their friendship primarily that Dr. Love has consented to give his time to come and bring this message to you. It is a real pleasure for me to welcome Dr. Love and to present him to you. Dr. J. Grafton Love! [Applause]

[Dr. J. Grafton Love's paper was presented.]

[The President returned and resumed the Chair as Dr. Love finished the presentation of his paper.]

President Owens: Thank you, Grafton. That was mighty fine.

Fellows, in my address to the House of Delegates yesterday, I unintentionally omitted what I think is a very important comment. You know, often people who do so much for the society and have been so loyal in their service fail to get any recognition.

It is the tradition and the custom that only doctors of medicine are permitted to address these General Sessions of the Medical Society of North Carolina, but inasmuch as I made that mistake yesterday, I think it is only fitting and in order that I forego precedent at this time, and I want to recognize Mrs. Sweeney, our recording secretary, who has been so loyal and faithful to our Society. She is the owner and founder of The Master Reporting Company, with headquarters in New York. She is the official reporter for the American Medical Association. She is our official recording secretary, and has been for many years. She has been so loyal to us she comes to us in person. She sends her associates elsewhere, but she comes to us herself. Mrs. Sweeney, in recognition of your loyalty to the Medical Society of the State of North Carolina, I would like to have you come up here and say to the Society whatever is on your mind and heart. [Applause]

Mrs. Fanny S. Sweeney: Gentlemen, to say that I am surprised by this honor which your President has just conferred upon me is putting it mildly. You know, it is my function to take down speeches, not to make them. Being taken unaware—and I assure you I had no idea until Dr. Owens mentioned my name that he was referring to me—all I can say is that I am deeply touched. Actually, my coming here year after year is because of my feeling that when I come here I am meeting old friends. Thank you again, Dr. Owens.

[At this point Dr. Paschal resumed the Chair.]

Chairman Paschal: We will next have a few announcements. At this time I would like to recognize Dr. J. Roy Norton, who has an announcement concerning the Cancer Institute at Lumberton.

Dr. J. Roy Norton: Dr. Paschal, Dr. Hill, Ladies and Gentlemen: I have been asked to make a statement with regard to the Cancer Institute at Lumberton. With your indulgence, I would like to mention a couple of other items while I am here.

There has been some confusion and some embarrassment as the result of people going to the Cancer Institute at Lumberton under the misconception that it is a research and highly specialized cancer treatment center. This institute, as most of you know, has been set up for terminal indigent cancer patients who have received all that in the opinion of the attending physician could be done in the way of surgery or x-ray or radium or any other definitive treatment.

I think you should convey the thought that it is a place where they would not have to go to a hospital where it would cost them \$15 or \$20 a day or more. If you could spread that information into the homes where the family have to go out and make a living; where there would be no one to care for an individual so afflicted; where they do not have all the facilities that would help to keep the patient comfortable in his last days; and where under such circumstances The Cancer Institute at Lumberton is the proper place to which to send them, it seems to me that it would clear up a good deal of confusion. It is a place where they will be much better cared for than they would be in most of the homes from which these people come. I think with that understanding and your saying it in your own way, it would be very helpful. The family and the individual should not expect a lot of treatment. All they expect to do is to keep these people comfortable. The Roberson County Medical Society, under the leadership of Dr. Roscoe McMillan, have been doing a magnificent job in taking turns in looking after the people there. I reiterate, it is not a hospital but a home where these terminal indigent cancer patients can be made more comfortable.

Another item I wanted to refer to is a telegram which I thought summarizes some of the things that you ought to know with regard to the polio vaccine.

It mentions first that the State Health Officers have been notified that regional medical officers of the Public Health Service will be giving out information from time to time.

We also know that a national committee has been set up from the standpoint of supply and distribution of the vaccine. It has not been announced, but there is to be another committee of virologists and epidemiologists who will be consulting and giving out advice from time to time on the more specific medical aspects of the problem. A meeting was called by Surgeon General Scheele to advise on an investigation of polio vaccine produced and which was withdrawn from distribution this week. In addition to the consulting group and staff members of the Public Health Service, the meeting included technical representatives of the six pharmaceutical houses manufacturing the vaccine. Dr. Scheele said they were included so that the service might benefit from their special knowledge regarding the production and distribution of the vaccine.

In arriving at conclusions and recommendations, the group was guided by last minute data obtained by telephone from health officials in various parts

of the country concerning cases of paralytic polio occurring among children who had been vaccinated.

As of noon Saturday, the number of cases reported to the Public Health Service was as follows: California 16, Idaho 8, Louisiana 2, Illinois 1, Colorado 1, Georgia 1. Georgia is the only one included in that group using the vaccine which we are using in this state, and the child that came down with polio did so only four days after the inoculation. All of you know that we are beginning to have polio at this time of year, and with four million first and second graders inoculated, certainly they are going to have some polio among that group. No one has claimed that the vaccine was 100 per cent effective, even after sufficient time elapsed to build up resistance.

I might call attention also to the fact that one of the things that was particularly disconcerting and probably the reason why one vaccine was taken off was not the 16 cases in Southern California—they are already beginning to have cases in the southern part of the country—but probably these eight cases in Idaho. What is happening right now is just holding it back until it can be definitely determined whether or not the vaccine should be released.

In releasing the latest tabulation, the Surgeon General pointed out that as of the present moment they represented a total of only 29 cases. Approximately four million children have been vaccinated. It is important to remember, Dr. Scheele said, that the field trials of the vaccine indicated it was from 50 to 90 per cent effective. It must be remembered that additional cases will inevitably occur among some of those for whom the vaccine is not effective. Some people do not build up resistance, and some others will not have adequate time to build up resistance.

The Surgeon General reiterated the belief of the Service that the mass inoculations now under way should be continued.

The group recommended that every effort be exerted to stay abreast on a day-to-day basis of the current incidence of polio among those who have received vaccine, securing both medical and laboratory data on each case reported.

In addition, the group felt that it is particularly important that practicing physicians themselves should keep careful data on all inoculations they administer, including the manufacturer's name, lot number, site of inoculation, and general health of the individual, and that these data be reported to health departments.

In addition to obtaining epidemiological and physical data, the group recommended that careful laboratory studies be conducted on affected individuals who have been injected with the vaccine and their families.

Chairman Paschal: Thank you, Dr. Norton.

For our next item on the program, I would like to recognize Mr. John M. Gibson, the Librarian of the Library of the State Board of Health.

Mr. John M. Gibson: Dr. Paschal, Dr. Hill, Members of the North Carolina Medical Association: About a year ago we began organizing the Medical and Public Health Library at the State Board of Health. So far, we have been concerned first with the actual process of organization which had to start from the beginning and was a rather long process, and making the library a primary service to the members of our own organization, that is, the State Board of Health.

But now we are in a position, we think, to expand our service and provide the type of library which we hope will be of some help; in fact, we

would like to believe it will be of a great deal of help outside of Raleigh and to all of the doctors, the whole medical profession of the State of North Carolina.

We have, of course, with certain limitations, a typical public health library. We have books there, current magazines, bound files of journals, current publications of the minor type, and any of that material, of course, the members of our staff can go in and use, any of you who are in Raleigh can go in and use as well.

We hope from now on to provide more than what one might normally expect of a library of that kind.

Although most libraries, including public health libraries, tend to be skittish about bibliographies, as I have found out in some of my own work, and the Library of Congress, the Medical Library of the Armed Services in Washington, and various other places have been very frank in saying that they do not provide bibliographies, we hope within our limitations to be able to provide that service.

If you are preparing a paper and need some references, we will do our best to provide bibliographical service.

Another service we have in mind—and this is in the very beginning stage—is after you have prepared a paper on any subject, with or without some listing of references from the library, if you think we can be of a little service perhaps in making a few changes, while your librarian is certainly not any great shakes as an editor or anything of that kind, but I have been making some kind of a living at it for the past twenty-five years, and if you think your manuscript can be improved a little by the use of that type of service, we will certainly be very glad to have you send the paper in. Naturally, any changes that are suggested will be only suggestive, and if you like your way better, of course, that will be quite all right.

Then a third service which is more or less taken for granted is that anything that is in the library that you think you can use, you are very welcome to have, and we will certainly be glad to have you use it. Unfortunately, some of our books are not very new, but we are getting in some new books, and we have quite a number of old books, including the library of Dr. Charles O'H. Laughinghouse, which is very fine for historical purposes. We have about thirty-five or forty books that are over a hundred years old. Any of our journals that are not in current use, we would be very glad to have you use.

As I say, we are just getting started. We hope you will not expect too much of us in the very beginning, and we are limited in our facilities, our funds and personnel, but we do have a very great desire to make the library of real service to all of you. That is what we are there for, and we feel we have an opportunity and are anxious to do all we can.

We hope any time you are in Raleigh you will come by to see us. If you have a problem that you think might be helped a little by just simply talking it over, we will be very glad to give you a very warm and cordial welcome. I hope I will be seeing you before so very long. Thank you very much!

Chairman Paschal: Thank you, Mr. Gibson.

The final part of the program today has to do with the presentation of the High School Essay.

To conduct this part of the program, I would like to recognize Dr. Dan Currie, a member of the Essay Committee of the North Carolina State Medical Society.

Dr. Currie: Ladies and Gentlemen: Each year there is an essay contest conducted for high school students. It is a rather prodigious undertaking. If you get into it, you will find out thing you didn't know, and, if you did, you have forgotten them. It was a great privilege to be a member of the committee. I learned something.

We have to present the winner a certificate, representing a \$600 educational scholarship at any college of his choice or secondary school, which is recognized by the Southern Association of Colleges and Secondary Schools.

Also we have the speaker present, but I would like you to recognize first his aunt who has accompanied him here, Miss June Randall of Henderson. Will you stand and let them recognize you? [Applause] I should also like to recognize the principal of the Henderson High School, Mr. F. D. Kessler. Will you please stand and be recognized?

The essay winner, out of the numerous good ones, is Raymond B. Randolph of Henderson, North Carolina, a fellow who has a high scholastic standing in high school. He is a budding chemist, a baseball pitcher, a track man, and popular on the campus. For example, he is in the senior play this year.

Obviously, he is a good composer of essays, being the winner for this year. Raymond, if you will come up, we would like to make the presentation. Raymond, it gives me great pleasure, in behalf of the North Carolina State Medical Society to present to you this certificate of award. The educational scholarship, will also come to you, and you will find it very useful. Congratulations to you.

We would like to hear your essay on "The Advantages of Private Medical Care." I ask you gentlemen to hear him well.

[The essay was then read.]

Dr. Currie: Thank you so much, Raymond. I am impressed with the point you make in that it costs so much more to live and the price of medicine has not gone up in proportion. It is about 150 per cent additional cost to keep up your standard of living and only about 30 per cent for medicine. Thank you, Raymond, and good fortune to you in your future education. We will be looking for you in the newspaper.

Chairman Paschal: I would like to add my own personal word of congratulation to Raymond for this excellent paper. I am sure that his parents would have been pleased to have been present here and heard him. He reflects great credit on them.

I would like also to add congratulations on behalf of the Medical Society of the State of North Carolina. We wish him godspeed.

This session is now adjourned.

[The meeting adjourned at twelve-twenty o'clock.]

PRESIDENT'S DINNER

Tuesday, May 3, 1955

The banquet was held in the main dining room, and was convened by Dr. Robert A. Ross, of Chapel Hill, who acted as Toastmaster.

The invocation was spoken by the Reverend Allen P. Brantley, District Superintendent of the North Carolina Methodist Conference, and previously pastor of the first Methodist Church of Elizabeth City, the congregation of which Dr. and Mrs. Zack D. Owens are members.

Following the invocation the distinguished guests of the Society were introduced by Dr. Robert A. Ross, Toastmaster, a physician of Chapel Hill.

Special recognition was given to Dr. Karl Busbee Pace, Greenville, N. C., General Practitioner of the

Year from the American Medical Association as well as Dr. Joseph J. Combs, Raleigh, N. C., President-elect of the Federation of State Medical Boards of the United States.

Toastmaster Ross then introduced Dr. Zack Doxey Owens of Elizabeth City for the presentation of his presidential address. [Applause.]

The President addressed the assembly of Fellows, Guests and Friends. [Applause.]

Toastmaster Ross: Thank you, Dr. Owens. That is a true Hippocratic oath.

And now, in behalf of the officers, in behalf of the Society, may I express my appreciation to Mr. Kent, who is President and Chairman of the Board of P. Lorillard, who prevailed upon our distinguished speaker to come down here tonight.

I want our speaker to know that he is welcome. I want his wife to know that we love her.

In North Carolina, which is tobacco land, where the legislature will put down a tax on leaf products, we do not think that the business of cancer of the lung and tobacco have too much connection. Anyway, when it comes to that we will take our cancer if necessary, and we will take our tobacco too. I do hope that you will transmit that information back to your distinguished President and Chairman, and to tell him that we are most grateful for having you here.

We in North Carolina also have two minor tobacco industries, one in Winston-Salem, which we need not name, and one in Durham which anybody can name. Together they put out some twenty-three or twenty-four different types of cigarettes.

In speaking of this matter of cancer of the lung, how many doctors here tonight do you see smoking cigarettes and how many of their wives?

By a very fortuitous circumstance, our delightful President, Dr. Zack Owens, knew Mack Daniels in New York City who in turn knew Mr. Alfred Kent. Zack Owens said, "We down in North Carolina would like to have your supreme, your number one, your par excellence performer come down and spend the day with us. We would like to have his wife and him as well. What he says is not important. We have taken this man into our living rooms, into our families, and into our hearts."

So Mr. Kent went to our distinguished speaker and asked him. And, in all due sincerity, I say that we are most grateful.

We do not think that this man is a professional funny man. He is a man who has a broad human feeling, deep perception, who intuitively knows and feels the things that folk are striving for, and that is just what he gives back to us. I can say sincerely that none of us here has ever seen his performance on television that we have not enjoyed and have not been pleased with it.

I have the unusual pleasure of presenting Mr. Herb Shriner. [Applause]

[Mr. Herb Shriner, the Hoosier and inimitable wit and philosopher of Indiana, long a welcomed visitor to the American household, and sometimes emissary of Old Gold Cigarettes as the television celebrity of "Two for the Money", presented a humorous address in which he skillfully caricatured modern medicine to the extreme delight of the eight hundred-odd dinner guests at the President's Banquet. The Society and its guests will long remember the sagacity of his wit, the brilliance and delightfulness of his homely allegories, and the general good-time to which his presence, and that of his good wife, contributed to this occasion of the One Hundred First Annual Sessions of the Medical Society of the State of North Carolina.]

[There was prolonged applause following his address.]

Toastmaster Ross: Ladies and gentlemen, you will remember that when Mr. Shriner appears on "Two for the Money" he puts out Old Golds. We have a P. Lorillard product here tonight that we want to give him. You remember the time when Mr. Rogers gave John D. Rockefeller ten cents. Now we want to give Mr. Shriner a P. Lorillard product. This has vitamins and minerals, and it is for chewing. Since he does not have a mustache, we have included a filter tip in here. We want to present to Mr. Shriner Beech-Nut Chewing Tobacco, a P. Lorillard product. [Applause.]

Mr. Shriner: That really is good. That is the best stuff in the world for starching your shoelaces. You can also repair worn spots in a tuxedo sleeve with it, a little dab on there, juiced up properly, that is. It also works good on dark suede shoes, and I accept it very, very thankfully. [Applause]

Toastmaster Ross: I am sure it is unnecessary for the audience and myself to express anything further to Mr. Shriner for his superb contribution to our information and to our edification, and, incidentally, to our entertainment.

Dr. John Payne will now present the President's Jewel to our President.

Dr. John Payne: Mr. Toastmaster, Distinguished Guests, Ladies and Gentlemen: As all of you know, it is a long-established custom of our Society to present to the outgoing President a memento of his period of service. This memento is known as the "President's Jewel." I consider it both an honor and a privilege that your President, and my friend, should hold me in sufficient esteem to request me to make this presentation.

It has been my good fortune to have enjoyed the association and friendship of our President for more than twenty years. He has many admirable characteristics, among which are devotion to duty, loyalty to friends and causes that he believes in, and an abiding interest in and love for the Medical Society of the State of North Carolina, which he has served so ably and devotedly in many capacities, including the high and honored office of the presidency which he is relinquishing tonight. Our medical society has been fortunate in most instances in having devoted and able men in the high office of the presidency—men whose leadership, ability, devotion, and industry have reflected credit not only on themselves but on the organized medical profession whom they have served. By reason of his judgment, the quality of his service, and his untiring devotion to the duties of this high office, Dr. Owens will rank high on the list of his distinguished predecessors who have borne the burden of the same position he has held.

And so, my friend and colleague, in behalf of the Medical Society of the State of North Carolina, whose members hold you in high esteem, may I say that "You have fought the good fight and kept the faith. Well done thou good and faithful servant."

As a token of our appreciation and esteem, I present this jewel which I know that you will keep and treasure as a reminder of the confidence of your colleagues and the honor and responsibility of the office which you have discharged so well. [Applause]

President Owens: Thank you, John, and I wish to pay a tribute to you, my faithful friend, whose close association and unflinching friendship throughout the years have meant so much to me.

Your contribution and loyalty to the Society is worthy of mention, and I want to say to the membership of this state Society of ours, that I accept this token of your esteem with a deep sense of gratitude and appreciation. I consider this jewel

a priceless possession. When you elected me your President, you bestowed upon me the highest honor a member of the medical profession can have in North Carolina. I shall cherish the memory of this and this happy occasion this evening as long as I live. I thank you, and thank you again. [Applause]

Toastmaster Ross: Thank you, Dr. Owens.

If there is no further business that any one has to come before us at this time, or if there is no new business, I declare this most pleasant occasion adjourned.

SECOND GENERAL SESSION

Wednesday Morning, May 4, 1955

The session convened in the ball room, Dr. George W. Paschal, Jr., Vice President, presiding. The session opened at nine-ten o'clock.

Chairman Paschal: The Second General Session of the Medical Society of the State of North Carolina is now in session and will come to order.

The first paper this morning is one entitled "Psychological Factors Related to Female Surgery" by Dr. A. J. Silverman, Dr. Sanford I. Cohen, Dr. Finn Magnussen and Dr. W. Edward McGough of the Duke University Medical School, Durham. The paper is from the Section on Neurology and Psychiatry.

Dr. Silverman is not here, and Dr. Magnussen is presenting the paper. [Dr. Magnussen presented his paper.]

Chairman Paschal: Gentlemen, the next speaker on the program is the Chief Surgeon of Duke University Medical School in Durham, Dr. Deryl Hart, whose subject is "The Place of Surgery in the Treatment of the Peptic Ulcer." [Dr. Hart presented his paper.]

Chairman Paschal: We are fortunate and pleased to have as our next speaker General George F. Lull. Dr. Lull, as you know, is our Secretary and General Manager of the American Medical Association. It gives me great pleasure to present Dr. Lull. [Applause]

[Dr. George F. Lull presented an illustrated report of the activities of the Headquarters of the American Medical Association in which he referred to the broad concept and organization of the Association and explained in detail, supported by illustrating slides, the various divisions and functions of the headquarter staff and the departments of the American Medical Association.]

[Applause attended the conclusion of the report.]

Chairman Paschal: Thank you, Dr. Lull.

Our next paper is entitled "Uses and Abuses of Blood Transfusions" by Dr. Robert W. Prichard, of the Department of Pathology, Bowman Gray School of Medicine, Winston-Salem. This paper comes to us from the Section on Pathology. [Dr. Prichard presented his paper.]

Chairman Paschal: Thank you very much, Dr. Prichard.

Our next paper comes from the Section on Gynecology and Obstetrics, and it is on "Pruritus Vulvae," by Dr. Roy Parker, of Kinston-Durham. [Dr. Parker presented his paper.]

Chairman Paschal: Thank you very much, Dr. Parker.

Ladies and gentlemen, I note with pleasure the presence in our audience this morning of one of our fine, former Presidents of this Society, the man who has done years of service and has earned our admiration and has our very profound affection. I would like to recognize, and to present to you, Dr. Hubert B. Haywood, of Raleigh. Dr. Haywood, will you please stand. [Applause]

Next is a report of the Implementation Committee for Region Three Health Services by Dr.

M. M. Van Sandt, who is Regional Medical Officer of the Federal Civil Defense Administration, from Thomasville, Georgia. [Dr. Van Sandt presented his paper.]

Chairman Paschal: Thank you, sir.

Ladies and gentlemen, while this session started on time, we are running considerably behind time now as far as the schedule is concerned. Therefore, with apologies, we are going to alter our schedule and hear our next speaker later. We will go into the Conjoint Session and I recognize Dr. G. Grady Dixon, President of the North Carolina State Board of Health, who will preside at this meeting. Dr. Dixon will come forward.

CONJOINT SESSION

[Dr. G. Grady Dixon, President of the N. C. State Board of Health, assumed the Chair.]

Chairman Dixon: The Conjoint Session will come to order. I want to introduce to this audience the members of the State Board of Health. As I call your names will you stand up, face the audience and let them see you. Dr. Hubert Haywood, Dr. John R. Bender, Mrs. J. E. Latta, Dr. A. C. Current, (DDS), Mr. H. C. Lutz, (DPh), Dr. John P. Henderson, and Dr. G. Curtis Crump. [Applause]

The next thing on the program will be the Annual Report of the Health Officer to the Conjoint Session.

[Dr. J. W. Roy Norton, Secretary and State Health Officer, presented the annual report of the N. C. State Board of Health.]

Chairman Dixon: You have heard the Health Officers' Report. What will you do with it?

[On motion regularly made and seconded, it was voted to adopt the Health Officers' Report.]

Chairman Dixon: Dr. London has a resolution that he would like to present before this Conjoint Session. Will he bring it forward and present it at this time.

Dr. London: Mr. Chairman, I would like to present the following resolution for adoption by the Medical Society and the State Board of Health:

"Whereas the introduction of poliomyelitis vaccine has been attended by unprecedented publicity and

"Whereas there is a growing tenseness on the part of the public due to uncertainties as to its distribution and

"Whereas there are agencies and means already existant to properly regulate the distribution of this vaccine and

"Whereas the best interests of the American people can be served by voluntary action rather than governmental control

"Therefore be it resolved that the Medical Society of the State of North Carolina in conjoint session with its State Board of Health send to its Congressional representative the following telegram:

"We urge that you oppose any legislation designed to control the distribution of poliomyelitis vaccine by governmental edict. We pledge the support of this Society and the State Board of Health in any voluntary methods which might be set up."

Mr. Chairman, I move the adoption of this resolution.

[The motion was seconded.]

Chairman Dixon: Is there any discussion?

[The motion was put to a vote and carried.]

Chairman Dixon: For many years we have had in our organization of the State Board of Health an effective and an efficient and retiring man. He works and doesn't ask for applause. I don't think I could adjourn this meeting until I have introduced Dr. John Hamilton, Director of the State Labora-

tory of Hygiene and Assistant State Health Officer. [Applause]

If there is nothing else to be brought before us a motion is in order to adjourn the Conjoint Session.

[Upon motion regularly made and seconded, the meeting was adjourned at eleven fifty-five o'clock.]

[Thereupon the Second General Session of the Medical Society of the State of North Carolina was reconvened, Dr. Paschal presiding.]

Chairman Paschal: Ladies and gentlemen, we have two or three other orders of business at this time. Following the awards, we will have the final scientific paper of the session, and following that paper we will have elections, so at the conclusion of these awards, I urge you to remain and participate in the elections and also hear a very fine paper.

At this time, I would like to recognize Dr. Lenox Baker, who will make the awards of the Golf Prizes and Exhibit Attendance Prizes.

[The awards were presented by Dr. Lenox Baker.]

Chairman Paschal: Let's come to order, please, and we will continue at this time. Again I want to apologize to the speaker for the change in the order of the program. I appreciate his indulgence. I would like to introduce to you Dr. Otto C. Brantigan from Baltimore, Maryland, who is Professor of Thoracic and Clinical Surgery at the University of Maryland. It is with a great deal of pleasure that I present Dr. Brantigan to you. His subject is, "Carcinoma of the Lungs."

[Dr. Brantigan injected slides of illustrations in presenting his subject, an essay of which he is preparing for publication in a subsequent issue of the North Carolina Medical Journal.]

Chairman Paschal: Thank you, Dr. Brantigan.

Gentlemen, we have some business to attend.

The first is the term of office on the N. C. Medical Care Commission for Dr. William Coppridge expires, and at this time we elect a member to succeed Dr. Coppridge to that position. The Chair will now open the floor for nominations for this four-year term.

Dr. Billings: I place the name of Dr. Coppridge in nomination to succeed himself.

Chairman Paschal: Dr. Coppridge is renominated to succeed himself.

Dr. London: I move that nominations be closed and that the Secretary be instructed to cast the unanimous ballot for Dr. Coppridge.

[The motion was seconded, was put to a vote and carried, and the Secretary cast the unanimous ballot.]

Chairman Paschal: Dr. Coppridge has been elected to succeed himself as a member of the North Carolina Medical Care Commission.

The second matter of business has to do with the election of a man to succeed Dr. Edward Hedgepeth, of Chapel Hill, to the Board of Trustees of the N. C. Hospital Saving Association. This is a three-year term.

Dr. Brewer: Mr. Chairman, I would like to nominate Dr. Edward Hedgepeth to succeed himself.

Chairman Paschal: Dr. Street Brewer has nominated Dr. Ed Hedgepeth to succeed himself in this position. Are there any other nominations? If not, all in favor of Dr. Hedgepeth let it be known by saying "aye"; opposed, "no." The motion is carried.

Dr. Murphy: I would like to bring to the Society a message from the Executive Council. For a number of years, the President-Elect has served for a one-year term as one of the four trustees on the

Board of Trustees of the N. C. Hospital Saving Association. It is the opinion of the men who have occupied that office and the Executive Council that the term is so short that it places a severe limitation on the usefulness of a man serving in that capacity. Therefore, the Executive Council has come to the conclusion that the place of the President-Elect should be occupied by someone elected to serve the full three-year term. The N. C. Hospital Saving Association has indicated a willingness to revise its by-laws to make that possible. Therefore, I would like to move that the secretary be instructed to cast the unanimous vote of this Society for Dr. Karl Pace, who is eminently qualified to serve a three-year term on the Board of Trustees of the N. C. Hospital Saving Association to take the place formerly occupied by the President-Elect.

[The motion was seconded.]

Chairman Paschal: Gentlemen, you have heard Dr. Murphy's recommendation and motion. You have heard the second by Dr. London. Is there any further discussion concerning this? If not, all in favor of this motion let it be known by saying "aye"; opposed, "no." The motion is carried.

Dr. Rousseau: Mr. Chairman and Members: I have today received the resignation of Dr. L. R. Hedgepeth of Lumberton as a member of the N. C. Hospital Saving Board of Trustees. He has an unexpired term of one year to serve, and I think it is now in order to nominate someone to serve Dr. Hedgepeth's one-year term.

Dr. London: Mr. Chairman, I move that we accept Dr. Hedgepeth's resignation with an expression of appreciation for the services he has rendered the Society and the N. C. Hospital Saving Association over the past year.

Chairman Paschal: Gentlemen, you have heard the motion of Dr. London. Is there a second?

[The motion was seconded. Discussion was called for. There being no discussion, the motion was put to a vote and carried.]

Dr. O. Norris Smith: Mr. Chairman, I would like to place in nomination the name of a member who was on the original committee to study and develop the Doctor's Plan of Prepayment and who would be an excellent man in this job, Dr. John Rhodes of Raleigh.

[The nomination of Dr. Rhodes was seconded.]

Chairman Paschal: Are there other nominations? If not, all in favor of Dr. Rhodes to fill this unexpired term for one year let it be known by saying "aye"; opposed, "no." The motion is carried.

I have a message directed to Dr. Owens as President of the North Carolina State Medical Society from Dr. Charles C. Trabue, President of the Tennessee State Medical Association, "Regret cannot attend your meeting. Wishing you every success."

Finally I have a communication directed to Dr. Owens which I would like to read to you. This communication is sent by each and all the exhibitors of the Medical Service Men, and it reads as follows:

"Dear Dr. Owens:

"May we take this opportunity to express to you and to Mr. Barnes and to the entire Medical Society our appreciation for the great courtesy which has been extended to us in the last three days, and particularly the banquet and entertainment for the exhibitors Monday evening. Due to your interest and cooperation it has been a pleasure for us to participate in this most successful meeting."

This session is now adjourned.

[The session adjourned at one-fifteen o'clock.]

THIRD GENERAL SESSION Wednesday Afternoon, May 4, 1955

The session convened in the ball room, Dr. Zack D. Owens presiding. The meeting was called to order at five o'clock.

President Owens: Fellow Members and Ladies: The Third General Session is convened. Will you please come to order.

As President of the Medical Society of the State of North Carolina and by authority of the Executive Council, which has been adopted by the House of Delegates of the Medical Society of the State of North Carolina, I hereby recognize the Fifty Year Club of the Medical Society of the State of North Carolina, composed of the Fellows of that Society who have gained that distinction by a fifty-year period of active practice and medical service within their lifetime.

It will be the purpose of this State Society to so recognize those on this occasion at each annual meeting, which will give due recognition to the continued surviving membership of this club. I wish on this occasion to extend to this group the felicitations, congratulations and admiration of the Medical Society and all of the Fellows as well as your many friends for the wonderful attainment represented by each of you and by you as a group collectively. It gives me a great deal of pleasure to present to the Medical Society of the State of North Carolina this Fifty Year Club and to grant to each of the new members a scroll, which may serve through posterity to indicate your achievement and distinction in this connection.

I am also happy to present to you a token which you may possess and cherish and wear to indicate to your fellow physicians and to your friends and to your acquaintances in general the distinction which has been extended to you by reason of this action today.

I will ask Dr. Hill to call the roll.

Dr. Hill: As I call the roll, we would like those who are present to form a line in front of the roster and face the audience.

James Ramsey Alexander,
Mecklenburg County
Joseph A. Allen,
Stanley County
Robert Hartlee Bellamy,
New Hanover County
Kemp Plummer Battle Bonner,
Carteret County
James Stevens Brown, Sr.,
Henderson County
Samuel Perry Burt,
Franklin County
Zebulon Marvin Caveness,
Wake County
Bertie Oscar Edwards,
Buncombe County
Isaiah Fearing,
Pasquotank-Camden-Currituck-
Dare Counties
Edwin Ferebee Fenner,
Vance County
Milton Reynolds Gibson,
Wake County
Andrew Howell Harriss,
New Hanover County
Charles Morris Hawes,
Beaufort County
Thomas Jefferson Holt,
Warren County
Delos D. Hooper,
Jackson-Swain Counties
William Redin Kirk,

Henderson County
James Franklin Laton,
Stanley County
James Madison Lynch,
Buncombe County
John Floyd Martin,
Harnett County
Moir Saunders Martin,
Surry-Yadkin Counties
Joseph A. Morris,
Granville County
Leon Burns Newell,
Mecklenburg County
James Montgomery Northington,
Mecklenburg County
Charles Henry Peete,
Warren County
Henry B. Perry, Sr.,
Ashe-Watauga Counties
Samuel Frederick Pfohl,
Forsyth County
John B. Ray,
Rockingham County
Hubert Ashley Royster,
Wake County
Edward McQueen Salley,
Henderson County
Gibson L. Sikes,
Sampson County
John Samuel Slate,
Forsyth County
Eustace H. Sloop,
Avery County
Oscar Fennell Smith,
Halifax County
John Haywood Stanley,
Johnston County
John Symington,
Moore County
James Nathaniel Taylor,
Guilford County
William Jackson Weaver,
Buncombe County
John Charles Wessell,
New Hanover County
Albert Miller Whisnant,
Mecklenburg County
John Bryan Wright,
Wake County

Mr. President, that completes the roll.

President Owens: Gentlemen, by your long period of loyal and unselfish service to humanity, you have not only brought credit upon yourselves but you have brought honor and distinction to the profession. May God bless your future.

The next item of business is to receive the Report of the House of Delegates. I will ask our Executive Secretary to read it.

Mr. Barnes: This is the report of the Nominating Committee to the second meeting of the House of Delegates:

For President-Elect, Dr. Donald Koonce of Wilmington.

For Vice President, Dr. Edward W. Schoenheit of Asheville.

For Second Vice President, Dr. Milton S. Clark of Goldsboro.

For Speaker of the House of Delegates, Dr. G. Westbrook Murphy of Asheville.

For Vice Speaker of the House of Delegates, Dr. Lenox D. Baker of Durham.

For Delegates to the American Medical Association, Dr. Millard D. Hill of Raleigh, Dr. Elias S. Faison of Charlotte, Dr. Charles F. Strosnider of Goldsboro.

For Alternate Delegates to the American Medical Association, Dr. Joseph F. McGowan of Asheville, Dr. William McN. Nicholson of Durham, Dr. Ernest Craige of Chapel Hill.

For Members of the State Board of Health, Dr. G. Grady Dixon of Ayden, Dr. Curtis D. Crump of Asheville.

The following were elected Councilors and Vice Councilors of the ten respective medical districts in the State:

First District:

Councilor—T. P. Brinn, M.D., Hertford

Vice Councilor—Q. E. Cooke, M.D., Murfreesboro

Second District:

Councilor—Frederick P. Brooks, M.D., Greenville

Vice Councilor—F. M. Simmons Patterson, M.D., New Bern

Third District:

Councilor—Dewey H. Bridger, M.D., Bladenboro

Vice Councilor—William A. Greene, M.D., Whiteville

Fourth District:

Councilor—Henderson Irwin, M.D., Eureka

Vice Councilor—Ernest L. Strickland, M.D., Wilson

Fifth District:

Councilor—Ralph B. Garrison, M.D., Hamlet

Vice Councilor—Louten R. Hedgpeth, M.D., Lumberton

Sixth District:

Councilor—George W. Paschal, Jr., M.D., Raleigh

Vice Councilor—Rives W. Taylor, M.D., Oxford

Seventh District:

Councilor—Leslie M. Morris, M.D., Gastonia

Vice Councilor—James F. Reinhardt, M.D., Lincolnton

Eighth District:

Councilor—Merle D. Bonner, M.D., Jamestown

Vice Councilor—Harry L. Johnson, M.D., Elkin

Ninth District:

Councilor—John C. Reece, M.D., Morganton

Vice Councilor—Frank W. Jones, M.D., Newton

Tenth District:

Councilor—William A. Sams, M.D., Marshall

Vice Councilor—Burnice E. Morgan, M.D., Asheville

The Carolina Hotel, Pinehurst, was selected for the place of the Annual Convention in 1956.

Dr. Hill: Mr. President and Members of the Third General Session: I move that the report be adopted.

[The motion was seconded.]

President Owens: Is there any discussion?

[The motion was put to a vote and carried.]

President Owens: Is there any unfinished business, Mr. Secretary?

Dr. Hill: Nothing sir.

President Owens: Is there any new business?

Dr. Hill: Nothing sir.

President Owens: The next item on the agenda is the installation of the President-Elect, Dr. James P. Rousseau of Winston-Salem, North Carolina. Dr. Westbrook Murphy, will you escort Dr. Rousseau to the rostrum?

Dr. Rousseau, before becoming President of this great Society, it becomes my duty to administer to you an oath of office which will become a solemn obligation.

[The following oath was administered.]

I, James Parks Rousseau, do solemnly swear that I shall carry out the duties of the office of President of the Medical Society of the State of North Carolina to the best of my ability. I shall strive constantly to maintain the ethics of the medical profession and to promote the public health and welfare. I shall dedicate myself and my office to improving the health standards of the American people and to the task of bringing increasingly improved medical care within the reach of every citizen. I shall uphold the Constitution of the United States and the constitution and bylaws of the Medical Society of the State of North Carolina at all times. I shall champion the cause of freedom in medical practice and freedom for all my fellow-Americans. I do solemnly swear that I will discharge the duties of office to the best of my ability, so help me God.

Dr. Rousseau: Thank you, President Owens. [Applause]

Dr. Owens: Dr. Rousseau, it is with a great deal of pleasure and satisfaction that I surrender the gavel to you and from now on declare you President of the Medical Society of the State of North Carolina.

President Rousseau: Thank you, Dr. Owens.

Ladies and Gentlemen, Fellow Members and good, loyal Friends: Last May, when I was on this rostrum as your President-Elect, I had many anxieties. My past year of association and learning under the able leadership of our retiring President, Dr. Zack D. Owens, and through the close association of members of the medical profession, through the Councilors and various committees and having the opportunity of observing the numerous problems with which they struggled in an attempt to come up with the right answer—these have changed all of my fears of last year to a feeling of great hope and courage for the future and continued progress of this great medical society.

I pledge again to meet all criticisms and answer them with sincerity, honesty, justice and truth as I see them, and, in true Churchillian fashion, I hope I still have some service to render.

I want to close my few brief remarks with a short prayer which has always been of great help to me when facing problems, and it goes like this: Give me the courage to accept with serenity the things I cannot change; give me the courage to change the things we can change; and give me the wisdom to know the difference. Thank you! [Applause]

Now in my new and honored duty as acting President as of this moment, I have the great honor to recognize the President-Elect, Dr. Donald B. Koonce. Dr. Koonce, will you stand and come to the platform and make a statement if you wish to. [Applause] [Dr. Koonce was escorted to the rostrum.]

Dr. Koonce: Ladies and gentlemen, I am extremely proud to have been made your President-Elect. At the present moment I am more than humble. I had no idea that I had so many sincere and true friends. I am also at the present time quite timid. As Dr. Rousseau said, I face you with a fear that possibly I cannot accomplish the things I would like to see accomplished, but I pledge you sincere efforts for the best welfare of the Medical Society of the State of North Carolina. I am very grateful. [Applause]

President Rousseau: It is now my distinct privilege to recognize Dr. Edward W. Schoenheit, of Asheville, North Carolina, the First Vice President. Dr. Schoenheit is not present.

It is a distinct pleasure as well as my duty to

recognize and present the Second Vice President of the Society, Dr. Milton S. Clark of Goldsboro. Milton, will you rise and make a statement?

Dr. Clark: Dr. Rousseau and Members of the Nominating Committee and the House of Delegates and all of my Friends: I want to thank you for this very great honor and the trust that you place in me, and I pledge to you my full efforts. Thank you so much. [Applause]

It is a like privilege to recognize our beloved Gibbons Westbrook Murphy, Speaker of the House. Dr. Murphy, will you rise? [Applause]

It is next my privilege to announce the election of Dr. Lenox Dial Baker of Durham as Vice Speaker of the House. Dr. Baker is not present, I am sorry.

President Rousseau: I now have the privilege of recognizing our very able and efficient Constitutional Secretary, Millard D. Hill, M.D. of Raleigh. Dr. Hill, will you stand and make a statement if you care to? [Applause]

Dr. Hill: I just want to thank the Nominating Committee and the Society for reelecting me. This will be the beginning of my seventh year. I am very grateful and humble. [Applause]

President Rousseau: If there is no other business to come before this present session, I now announce that the one hundred and first meeting of the Medical Society of the State of North Carolina is adjourned, sine die, at five twenty-five o'clock P. M.

The Month in Washington

For more than a year the administration has been attempting to work out a system of voluntary, contributory health insurance for Uncle Sam's two million or so civilian employees and their families. It would seem a simple thing to arrange, considering that most big employers have had similar plans in operation for years. At any rate, the plan is ready now for Congress to act on, but putting it together hasn't been easy.

First, there was the question of how to fit in the many already existing health insurance plans (some conducted by U.S. employee unions), and at the same time to offer coverage to government people working and living where no adequate insurance is being offered.

Also, there was wide disagreement as to how much of the premium the federal government should pay; in private industry, employers' contributions range from a small percentage to the entire cost. U.S. employee unions naturally thought the federal government should set an example in generosity.

The program was first outlined early in the year. It then was put on the shelf for two reasons: a few refinements had to be made, and Congress first had to decide how big a pay raise it was going to allow U.S. workers this year before thinking about a fringe benefit, such as health insurance. The whole program was sent to House and Senate just at the start of the adjournment rush, with the realization that not much could be hoped for this session.

The plan offers U.S. employees the option of signing up with a local non-profit service or indemnity plan, providing 75 per cent of the workers in the particular operation vote for a particular plan and providing that plan is approved by the U.S. Civil Service Commission. If the employees can't get together, or if no adequate plan is available locally, they can sign up for a uniform national indemnity plan to be underwritten by one or more large national insurance companies and negotiated by the Civil Service Commission. The proposed law itself lists specifically the original benefits that must be provided by the uniform plan, but authorizes the Commission to readjust them.

Regardless which type coverage the employee selects for himself and his family, the federal contribution would be figured the same way. It could not exceed one third of the total premium, or \$19.50 annually for a single person or \$52 for one with dependents, whichever figure is the lesser. If the uniform plan is chosen, the single employee could not be charged more than \$39 annually, or the one with dependents more than \$108 annually. But under any other plan, the employee would pay the difference between the U.S. contribution and the premium cost.

A system of major medical cost or catastrophic insurance also would be provided. Under it the employee would have to pay the first \$100 of cost, after benefits of the basic policy had been exhausted, before major medical cost benefits would become available. From that point on, until \$10,000 had been paid by the company, the employee would have to pay only 25 per cent.

* * *

The first major medical bill enacted was the extension for another two years of the doctor draft act, which for five years has been furnishing the Armed Forces and the Public Health Service with most of their doctors. Before passage, two changes were made in the law. The maximum age for induction was dropped five years. Under the old law a man could not be taken against his wishes after he had reached his fifty-first birthday; the new law reduced it to his forty-sixth birthday. Also, the law no longer applies to physicians and dentists who have reached their thirty-fifth birthdays and who have been rejected for a medical or dental commission at any time solely on the grounds of physical condition.

Defense Department points out that the man has to be able to demonstrate that he actually applied for a medical or dental commission and was rejected; a 4-F draft board classification is not sufficient. The department also said that the law will not result in the discharge of men already in uniform, even though they could not be inducted under the new law.

Good health cannot be forced upon the public. We can, however, create an environment in which people will study their health needs and work out ways of doing what they want to do with what they have. This is true health education and the essence of democracy.—Leroy E. Burney, M.D., Am. J. Pub. Health, Feb., 1955.

The Medical Society of the State of North Carolina



OFFICERS, COMMITTEES AND ROSTER OF FELLOWS

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Roster by Counties

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Dr. Jonas E. Salk receives *-1955- Mutual of Omaha* *Criss Award of \$10,000* *and Gold Medal*

At the annual convention of the American Medical Association in Atlantic City on June 7, 1955, Dr. Jonas E. Salk was presented with the 1955 Mutual of Omaha Criss Award of \$10,000 and a gold medal.

Created "to encourage and reward outstanding contributions to health and safety," the Criss Award is part of Mutual of Omaha's continuing endeavor to promote healthier, happier lives . . . an endeavor over and above its direct service to its millions of policyowners who have received over \$600,000,000 in benefits from Mutual of Omaha health and accident insurance.

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Nomination blanks for the 1956 Mutual of Omaha Criss Award may be secured by writing to the Board of Judges in care of Mutual of Omaha, Omaha, Nebraska.

The record speaks for itself

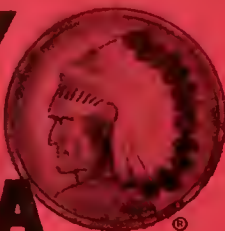
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The Medical Society of the State of North Carolina

OFFICERS, COMMITTEES AND ROSTER OF FELLOWS

Alphabetical Listing and Roster by Counties

CONTENTS

	Page
Officers	3
Committees	5
Boards	11
Councilor Districts	12
Alphabetical List of Fellows	13
Key to Specialties	53
Roster of Fellows by Counties	55
Fifty Year Club	54

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Speaker of House of Delegates—G. WESTBROOK MURPHY, M.D., 611 Flatiron Building,
 Asheville
Vice Speaker of House of Delegates—LENOX D. BAKER, M.D., Duke Hospital, Durham

The above-named officers, councilors, and speakers constitute the Executive
 Council of the Society which has interim authority over the affairs of the Society be-
 tween annual meetings of the House of Delegates.

SECTION CHAIRMEN — 1955-1956

General Practice of Medicine and Surgery—WILLIAM P. KAVANAGH, M.D., Cooleemee
Practice of Medicine—KENNETH D. WEEKS, M.D., 1605 W. Thomas St., Rocky Mount
Ophthalmology and Otolaryngology—JOHN S. GORDON, M.D., 412 N. Church St.,
 Charlotte
Surgery—JAMES F. MARSHALL, M.D., 310 W. 4th Street, Winston-Salem
Pediatrics—PAUL F. MANESS, M.D., 321 W. Front St., Burlington
Gynecology and Obstetrics—JAMES F. DONNELLY, M.D., State Board of Health, Raleigh
Public Health and Education—A. HUGHES BRYAN, M.D., School of Public Health,
 Chapel Hill
Neurology and Psychiatry—THOMAS W. FARMER, M.D., N. C. Memorial Hospital,
 Chapel Hill
Radiology—THOMAS G. THURSTON, M.D., 512 Mocksville Ave., Salisbury
Pathology—JOHN C. REECE, M.D., Grace Hospital, Morganton
Anesthesia—LEONARD NANZETTA, M.D., City Memorial Hospital, Winston-Salem

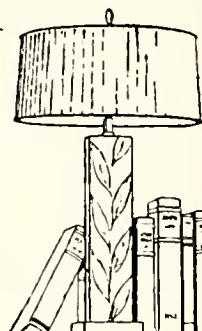
DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION (1955)

C. F. STROSNIER, M.D., 111 E. Chestnut Street, Goldsboro
 B. O. EDWARDS, M.D., 310 Flatiron Building, Asheville
 MILLARD D. HILL, M.D., 15 W. Hargett Street, Raleigh
 PAUL F. WHITAKER, M.D., Alternate, 1205 N. Queen Street, Kinston
 WILLIAM MCN. NICHOLSON, M.D., Alternate, Duke Hospital, Durham
 G. GRADY DIXON, M.D., Alternate, 215 E. Second Street, Ayden

DELEGATES 1956-1959

C. F. STROSNIER, M.D., 111 E. Chestnut Street, Goldsboro
 ELIAS S. FAISON, M.D., 1012 Kings Drive, Charlotte
 MILLARD D. HILL, M.D., 15 W. Hargett Street, Raleigh
 WILLIAM MCN. NICHOLSON, M.D., Alternate, Duke Hospital, Durham
 JOSEPH F. MCGOWAN, M.D., Alternate, 29 Market Street, Asheville
 ERNEST CRAIG, M.D., Alternate, N. C. Memorial Hospital, Chapel Hill

Thirst, too, seeks quality



Coca-Cola
 makes any pause
 the pause
 that refreshes

SCHEDULE OF COMMITTEE APPOINTMENTS, 1955-56

NOTE: The Committees listed herein have been authorized by President James P. Rouseau and/or are required under the Constitution and By-Laws.

1. Committee to Work with the North Carolina Industrial Commission (7)

Wm. F. Hollister, M.D., Chairman, c/o Moore County Hospital, Pinehurst
 John B. Anderson, M.D., 201 Haywood Bldg., Asheville
 John Wm. Baluss, Jr., M.D., 232 Ray Avenue, Fayetteville
 Richard McC. Taliaferro, M.D., 153 Bishop Street, Greensboro
 Guy L. Odum, M.D., Duke Hospital, Durham
 Charles T. Wilkinson, M.D., Wilkinson Bldg., Wake Forest
 Thomas G. Thurston, M.D., 512 Mocksville Avenue, Salisbury

2. Committee Advisory to the Auxiliary (6)

Roscoe D. McMillan, M.D., Chairman, P. O. Box 232, Red Springs
 Eleanor B. Easley, M.D., 604 Chapel Hill St., Durham
 Milton S. Clark, M.D., 401 Bank of Wayne Bldg., Goldsboro
 Powell G. Fox, M.D., 302 Land Bldg., Raleigh
 Jean C. McAlister, M.D., 104 E. Northwood St., Greensboro
 Katherine H. Anderson, M.D., 138 N. Hawthorne Road, Winston-Salem

3. Committee on Child Welfare (6)

Angus M. McBryde, M.D., Chairman, Duke Hospital, Durham
 Edward C. Curnen, Jr., M.D., Memorial Hospital, Chapel Hill
 Roy D. Daniel, M.D., Ferguson Bldg., Sylva
 Donnie H. Jones, Jr., M.D., Box 67, Princeton
 J. Buren Sidbury, Sr., M.D., 15 N. Fifth Street, Wilmington
 F. A. Blount, M.D., 4th Street at Spring, Winston-Salem

4. Committee on Cancer (12) (Legal—1 each Congressional District)

Donald B. Koonce, M.D., Chairman, 408 N. 11th Street, Wilmington
 James F. Marshall, M.D., Vice-Chairman, 310 W. 4th Street, Winston-Salem
 Charles I. Harris, Jr., M.D., Martin General Hospital, Williamston
 H. Fleming Fuller, M.D., Kinston Clinic, Kinston
 Corbett E. Howard, M.D., Drawer 1141, Goldsboro
 Hubert McN. Poteat, Jr., M.D., 207 S. 3rd Street, Smithfield
 Robert J. Reeves, M.D., Duke Hospital, Durham
 Carl V. Tyner, M.D., 201 N. Henry Street, Leaksville
 Irving E. Shafer, Sr., M.D., 108 W. Innes Street, Salisbury
 Wm. H. Pettus, Jr., M.D., 1012 Kings Drive, Charlotte
 Harry D. Riddle, M.D., 166 W. Franklin Street, Gastonia
 Joshua F. B. Camblos, M.D., 500 New Medical Bldg., Asheville

5. Committee on Finance (4)

Wayne J. Benton, M.D., Chairman, 514½ S. Elm Street, Greensboro
 Harold B. Smith, M.D., 113 9th Street, N. Wilkesboro
 V. M. Hicks, M.D., 127 W. Hargett St., Raleigh
 Allan D. Tuggle, M.D., 2335 Forest Drive, Charlotte

6. Committee on Hospitals and Professional Relations and the Corporate Practice of Medicine (11) 1 each District

F. M. Simmons Patterson, M.D., Chairman, 1402 Rhem Avenue, New Bern
 John Haney Keller, M.D., Box 71, Ahoskie
 James Tidler, M.D., 306 N. Eleventh Street, Wilmington
 Hubert McN. Poteat, Jr., M.D., 207 S. 3rd Street, Smithfield
 Joseph S. Hiatt, Jr., M.D., 208 S. W. Broad Street, Southern Pines
 Harold B. Kernodle, M.D., Kernodle Clinic, Burlington
 Claude B. Squires, M.D., 403 N. Tryon Street, Charlotte
 Victor M. Crescenzo, M.D., 315 S. Main Street, Reidsville
 Joseph B. Hankins, M.D., 20 W. 5th Avenue, Lexington
 James S. Raper, M.D., 20 Battery Park Avenue, Asheville
 John P. Davis, M.D., 310 W. Fourth St., Winston-Salem, N. C.

7. Committee on Occupational Health (16)

Harry L. Johnson, M.D., Chairman, P. O. Box 530, Elkin
 Phil L. Barringer, M.D., 101 S. Hayne Street, Monroe
 Ernest W. Furguson, M.D., Plymouth Clinic, Plymouth
 David G. Bunn, M.D., Whiteville
 G. Norman Boyer, M.D., Ecusta Paper Corp., Pisgah Forest
 Herman F. Easom, M.D., Eastern N. C. Sanatorium, Wilson
 Theodore S. Raiford, M.D., 20 Battery Park Avenue, Asheville
 John M. Hall, M.D., W. Main Street, Elkin
 Logan T. Robertson, M.D., 247 Charlotte Street, Asheville
 Joseph A. Elliott, Sr., M.D., 1012 Kings Drive, Charlotte
 William P. Richardson, M.D., Box 758, N. C. Memorial Hosp., Chapel Hill
 J. H. Patterson, M.D., Box 506, Broadway
 Mac Roy Gasque, M.D., Ecusta Paper Corp., Pisgah Forest
 David A. Young, M.D., 714 St. Mary's St., Raleigh
 Corbett E. Howard, M.D., Drawer 1141, Goldsboro
 Manson Meads, M.D., Bowman Gray School of Medicine, Winston-Salem

8. Committee on Legislation (13)

J. Street Brewer, M.D., Chairman, P. O. Box 98, Roseboro
 Millard D. Hill, M.D., 17 W. Hargett Street, Raleigh
 Charles M. Norfleet, Jr., M.D., Bowman Gray School of Medicine, Winston-Salem

- John C. Young, M.D., 403 Flatiron Bldg., Asheville
- Joseph A. Elliott, Sr., M.D., 1012 Kings Drive, Charlotte
- Fleetus L. Gobble, Jr., M.D., 612 W. Fifth Street, Winston-Salem
- Arthur H. London, Jr., M.D., 306 S. Gregson Street, Durham
- Earl W. Brian, M.D., 127 W. Hargett Street, Raleigh
- Benjamin W. McKenzie, M.D., 709 Barker Street, Salisbury
- Hugh A. McAllister, M.D., Medical Arts Bldg., Lumberton
- Joseph J. Combs, M.D., 127 W. Hargett Street, Raleigh
- Palmer A. Shelburne, M.D., 220 Medical Arts Bldg., Greensboro
- Dewey H. Bridgers, M.D., Bladenboro
- 9. Advisory Committee to the North Carolina Medical Care Commission (5)**
- Frederick C. Hubbard, M.D., Chairman, Box 30, N. Wilkesboro
- Wm. R. Floyd, M.D., 1016 N. Church St., Concord
- Charles I. Harris, Jr., M.D., Martin General Hospital, Williamston
- George W. Holmes, M.D., 620 Nissen Bldg., Winston-Salem
- Junius W. Davis, Jr., M.D., 315 Craven Street, New Bern
- 10. Committee on Mental Hygiene (10)**
- Allyn B. Choate, M.D., Chairman, 1012 Kings Drive, Charlotte
- George C. Ham, M.D., Memorial Hospital, Chapel Hill
- Thomas T. Jones, M.D., 604 W. Chapel Hill St., Durham
- Joseph B. Stevens, M.D., 363 N. Elm Street, Greensboro
- Lloyd J. Thompson, M.D., 300 S. Hawthorne Road, Winston-Salem
- James T. Vernon, M.D., Broadoaks Sanatorium, Morganton
- Luther R. Doffermeyre, M.D., 119 Lucknow Square, Dunn
- M. J. Hornowski, M.D., 394 Merrimon Avenue, Asheville
- George Mundorf, M.D., 1111 E. Morehead Street, Charlotte
- Harold L. Bacon, M.D., Branton Bldg., Bryson City
- 11. Committee on Scientific Awards (8)**
- Rowland T. Bellows, M.D., Chairman, 1012 Kings Drive, Charlotte
- Charles M. Norfleet, Jr., M.D., Bowman Gray School of Medicine, Winston-Salem
- Jesse P. Chapman, M.D., New Medical Bldg., Asheville
- Ernest Craige, M.D., Memorial Hospital, Chapel Hill
- George J. Baylin, M.D., 3516 Duke Hospital, Durham
- Wm. S. Doshier, M.D., 306 N. 11th Street, Wilmington
- George W. James, M.D., 205 S. Hawthorne Road, Winston-Salem
- William O. Beavers, M.D., 1016 N. Elm St., Greensboro
- Emory Hunt, (Mr.), (Consultant), U. N. C., Chapel Hill
- 12. Committee on Necrology (3)**
- Charles H. Pugh, M.D., Chairman, Box 527, Gastonia
- Ben F. Royal, M.D., Box 628, 907 Evans Street, Morehead City
- J. Buren Sidbury, Sr., M.D., 15 N. 5th Street, Wilmington
- 13. Committee on Postgraduate Medical Study (8)**
- Amos N. Johnson, M.D., Chairman, Main Street, Garland
- Wm. McN. Nicholson, M.D., Duke Hospital, Durham
- John R. Bender, M.D., 820 Nissen Bldg., Winston-Salem
- Wm. P. Richardson, M.D., Memorial Hospital, Chapel Hill
- Monroe T. Gilmour, M.D., 1351 Durwood Drive, Charlotte
- John B. Anderson, M.D., 201 Haywood Bldg., Asheville
- Joseph B. Stevens, M.D., 363 N. Elm Street, Greensboro
- Courtland H. Davis, Jr., M.D., 300 S. Hawthorne Road, Winston-Salem
- 14. Committee on Publications (5)**
- Millard D. Hill, M.D., Chairman, 17 W. Hargett Street, Raleigh
- John Borden Graham, M.D., Box 1020, Chapel Hill
- Wingate M. Johnson, M.D., 300 S. Hawthorne Road, Winston-Salem
- G. Westbrook Murphy, M.D., 611 Flatiron Bldg., Asheville
- Wm. McN. Nicholson, M.D., Duke Hospital, Durham
- 15. Committee on Public Relations (3 members and 7 District Consultants)**
- Amos N. Johnson, M.D., Chairman, Main Street, Garland (1958)
- John S. Rhodes, M.D., 700 W. Morgan Street, Raleigh (1957)
- Fred K. Garvey, M.D., 300 S. Hawthorne Road, Winston-Salem (1956)
- John A. Payne, III, M.D., (Consultant), Sunbury
- James Graham Ramsay, M.D., (Consultant), 120 Washington Street, Washington
- Edgar T. Beddingfield, M.D., (Consultant), P. O. Box 137, Stantonsburg
- Arthur E. Morgan, M.D., (Consultant), 234 Ray Avenue, Fayetteville
- Monroe T. Gilmour, M.D., (Consultant), 1351 Durwood Drive, Charlotte
- Irving E. Shafer, Sr., M.D., (Consultant), 108 W. Innes Street, Salisbury
- Wm. H. Burch, M.D., (Consultant), Valley Clinic, Bat Cave
- 16. Committee on Tuberculosis (6)**
- Joseph S. Hiatt, Jr., M.D., Chairman, 208 S. W. Broad Street, Southern Pines
- Wm. M. Peck, M.D., N. C. Sanatorium, McCain
- Herman F. Easom, M.D., Eastern N. C. Sanatorium, Wilson
- John M. Futrell, M.D., Summerfield
- Merle D. Bonner, M.D., Guilford County Sanatorium, Jamestown
- John C. Wiggins, Jr., M.D., 415 N. Spring Street, Winston-Salem

17. Committee on Scientific Work (7)

Edward W. Schoenheit, M.D., Chairman, 46 Haywood Street, Asheville
James P. Rousseau, M.D., 1014 W. 5th Street, Winston-Salem
Millard D. Hill, M.D., 17 W. Hargett Street, Raleigh
Donald B. Koonce, M.D., 408 N. 11th Street, Wilmington
Lenox D. Baker, M.D., Duke Hospital, Durham
Julian C. Brantley, Jr., M.D., 410 Peachtree Street, Rocky Mount
George R. Miller, M.D., 412 Realty Bldg., Gastonia

18. Committee on Professional Liability Insurance (6)

G. Westbrook Murphy, M.D., Chairman, 611 Flatiron Bldg., Asheville
George W. Paschal, Jr., M.D., Vice-Chairman, 311 Land Bldg., Raleigh
Alban Papineau, M.D., Plymouth Clinic, Plymouth
Thomas E. Forbes, M.D., 307 W. Morehead Street, Reidsville
Wm. T. Pettus, Jr., M.D., 1012 Kings Drive, Charlotte
Wm. H. Boyce, M.D., 300 S. Hawthorne Road, Winston-Salem

19. Committee on Group Health and Accident Insurance (4)

Zack D. Owens, M.D., Chairman, Medical Bldg., Elizabeth City
Joseph A. Elliott, Sr., M. D., 1012 Kings Drive, Charlotte
M. B. Cree, M.D., Professional Bldg. Arcade, Hendersonville
Stephen G. Wilson, M.D., Box 513, Angier

20. Committee on Coroner System (13)

John H. Hamilton, M.D., Chairman, 214 W. Jones Street, Raleigh
Ernest H. Yount, Jr., M.D., 300 S. Hawthorne Road, Winston-Salem
John P. U. McLeod, M.D., McLeod Clinic, Marshville
Nathan A. Womack, M.D., Memorial Hospital, Chapel Hill
Wm. Raney Stanford, M.D., 111 Corcoran Street, Durham
John C. Young, M.D., 403 Flatiron Bldg., Asheville
J. Deryl Hart, M.D., Duke Hospital, Durham
Hunter McG. Sweaney, M.D., 1200 broad St., Durham
J. Grover Raby, M.D., 300 St. Patrick Street, Tarboro
Howard M. Starling, M.D., 505 Reynolds Bldg., Winston-Salem
John W. Allgood, M.D., 113 Price Street, Greensboro
John W. Morris, M.D., 900 Shepard Street, Morehead City
John C. Reece, M.D., Grace Hosp., Morganton

21. Committee on Maternal Welfare (12)

James F. Donnelly, M.D., Chairman, State Board of Health, Raleigh (term expires 1957)
Glenn E. Best, M.D., Main Street, Clinton (term expires 1957)
Guy H. Branaman, Jr., M.D., 500 St. Mary's Street, Raleigh (term expires 1958)
Avon H. Elliot, M.D., Ex-Officio, State Board of Health, Raleigh

*Walter O. Duck, M.D., P. O. Box 387, Mars Hill (term expires 1956)

**William A. Hoggard, Jr., M.D., 1502 Caroline Avenue, Elizabeth City (term expires 1959)

***Jesse Caldwell, Jr., M.D., 114 W. Third Street, Gastonia (term expires 1958)

Joseph A. Gill, M.D., 1502 Carolina Ave., Elizabeth City (term expires 1958)

Frank R. Lock, M.D., 300 S. Hawthorne Road, Winston-Salem (term expires 1957)

Hugh A. McAllister, M.D., Medical Arts Bldg., Lumberton (term expires 1958)

George O. Moss, M.D., RFD, Rutherfordton, (term expires 1957)

Robert A. Ross, M.D., Memorial Hospital, Chapel Hill (term expires 1958)

*Resignation—E. W. Franklin, M.D.

**Burnice E. Morgan, M.D.

***John C. Tayloe, M.D.

22. Committee to Extend the Annual Sessions (6)

Roscoe D. McMillan, M.D., Chairman, Box 232, Red Springs

Paul W. Johnson, M.D., 824 Nissen Bldg., Winston-Salem

Millard D. Hill, M.D., 17 W. Hargett Street, Raleigh

Lenox D. Baker, M.D., Duke Hospital, Durham

Paul F. Whitaker, M.D., N. Queen Street, Kinston

Warner Wells, M.D., Memorial Hosp., Chapel Hill

23. Committee on Veterans Affairs (9)

Samuel L. Elfmon, M.D., Chairman, 225 Green Street, Fayetteville

Eben Alexander, M.D., 300 S. Hawthorne Road, Winston-Salem

Vernon L. Andrews, M.D., Box 407, Mt. Gilead

Everett I. Bugg, Jr., M.D., Broad and Englewood, Durham

Robert L. Garrard, M.D., 800 N. Elm Street, Greensboro

Vernon W. Taylor, Jr., M.D., Hugh Chatham Hospital, Elkin

John C. McLeod, Jr., M.D., 811 Simmons Street, Goldsboro

John B. Hickam, M.D., Box 3702, Duke Station, Durham

John T. Sessions, Jr., M.D., U. N. C. Dept. of Med., Chapel Hill

24. Committee on Rural Health and Education (11)

W. Wyan Washburn, M.D., Chairman, (7th District) Boiling Springs

William H. Romm, M.D., (1st District), P. O. Box 1, Moyock

Rachel D. Davis, M.D., (2nd District), 111 E. Gordon Street, Kinston

W. Plato Starling, M.D., (3rd District) Box 297, Roseboro

Thomas J. Taylor, M.D., (4th District), 643 Roanoke Ave., Roanoke Rapids

Daniel S. Currie, Jr., M.D., (5th District), 302 Old Street, Fayetteville

James Donald Bradsher, M.D., (6th District) Box 168, Roxboro

Vernon W. Taylor, Jr., M.D., (8th District) Hugh Chatham Hospital, Elkin

Charles E. Cloninger, M.D., (9th District), P. O. Box 245, Conover

Hugh A. Matthews, M.D., (10th District), 44 Academy Street, Canton

R. Vernon Jeter, M.D., (At Large) Plymouth Clinic, Plymouth

25. Medical Advisory Committee on Doctors' Insurance Plan (9)

Arthur H. London, Jr., M.D., Chairman, 306 S. Gregson Street, Durham
 O. Norris Smith, M.D., 363 N. Elm Street, Greensboro
 Howard H. Bradshaw, M.D., 300 S. Hawthorne Road, Winston-Salem
 Eleanor B. Easley, M.D., 604 W. Chapel Hill Street, Durham
 Willard C. Goley, M.D., 214 N. Marshall Street, Graham
 Amos N. Johnson, M.D., Main Street, Garland
 Robert W. King, M.D., 107 Bradford Avenue, Fayetteville
 Jacob H. Shuford, M.D., 7 Main Avenue, Place S. W., Hickory
 Charles T. Wilkinson, M.D., 205 Waite St., Wake Forest

26. Committee to Arrange Facilities for Annual Session (3)

Millard D. Hill, M.D., Chairman, 17 W. Hargett Street, Raleigh
 J. C. Grier, Jr., M.D., Carthage Road, Pinehurst
 M. W. Marr, M.D., Carolina Bldg., Pinehurst

27. Committee on Emergency Medical Service (15)

Chauncey L. Royster, M.D., Chairman, 707 W. Morgan Street, Raleigh
 George A. Watson, M.D., 306 S. Gregson Street, Durham
 J. Kingsley MacDonald, M.D., 1524 Harding Place, Charlotte
 Fred T. Foard, M.D., 1815 W. Smallwood Drive, Raleigh
 Harry D. Riddle, M.D., 166 W. Franklin Street, Gastonia
 Felda Hightower, M.D., 300 S. Hawthorne Road, Winston-Salem
 M. J. Hornowski, M.D., 394 Merrimon Street, Asheville
 Roger W. Morrison, M.D., 65 Sunset Parkway, Asheville
 Ben F. Royal, M.D., Box 628, Morehead City
 Heyward C. Thompson, M.D., Box 202, Shelby
 Roy B. McKnight, M.D., 403 N. Tryon Street, Charlotte
 W. Walton Kitchin, Sampson County Hospital, Clinton
 Furman P. Covington, M.D., 2 Salem Street, Thomasville
 Newsom P. Battle, M.D., 404 Falls Road, Rocky Mount
 Horace H. Stovall, M.D., 1018 N. Elm Street, Greensboro

28. Committee on Medical Society Headquarters Facilities (6)

William M. Coppridge, M.D., Chairman, 1200 Broad Street, Durham
 Malory A. Pittman, M.D., Wilson Clinic, Wilson
 Frederick C. Hubbard, M.D., Box 30, N. Wilkesboro
 Harry L. Brockman, M.D., 649 N. Main Street, High Point
 Hugh A. Thompson, M.D., 309 Hillsboro Street, Raleigh
 Elias S. Faison, M.D., 1012 Kings Drive, Charlotte

29. Committee on Military Service (8)

George W. Paschal, Jr., M.D., Chairman, 311 Land Bldg., Raleigh
 Ralph J. Sykes, M.D., 205 Rawley Avenue, Mount Airy

Paul E. Jones, M.D., 306 Professional Bldg., Kannapolis

John P. Bond, M.D., 155 S. York Street, Gastonia

H. Mack Pickard, M.D., 7 N. 17th Street, Wilmington

L. Everett Sawyer, M.D., 104 W. Colonial Avenue, Elizabeth City

Thomas D. Slagle, M.D., Box 456, Sylva

Richard L. Masland, M.D., 300 S. Hawthorne Road, Winston-Salem

30. Committee to Revise the Constitution and By-Laws (7)

Roscoe D. McMillan, M.D., Chairman, Box 232, Red Springs

Moir S. Martin, M.D., Cherry Street, Mount Airy

Wayne J. Benton, M.D., 514½ S. Elm Street, Greensboro

J. Stuart Gaul, Sr., M.D., 315 Professional Bldg., Charlotte

Milton S. Clark, M.D., 139 W. Walnut St., Goldsboro

Louis DeS. Shaffner, M.D., 300 S. Hawthorne Road, Winston-Salem

Wingate M. Johnson, M.D., 300 S. Hawthorne Road, Winston-Salem

31. Mediation Committee (5)—1st five past-presidents

Roscoe D. McMillan, M.D., Chairman, Box 232, Red Springs

Zack D. Owens, M.D., Secretary, Medical Bldg., Elizabeth City

Frederick C. Hubbard, M.D., Box 30, N. Wilkesboro

J. Street Brewer, M.D., Box 98, Roseboro

Joseph A. Elliott, Sr., M.D., 1012 Kings Drive, Charlotte

32. Committee on Eye Care (To work with the North Carolina State Board of Health, N. C. Commission for the Blind and the School-Health Program) (7)

Alan Davidson, M.D., Chairman, Box 1313, New Bern

Horace M. Dalton, M.D., 400 Glenwood Ave., Kinston

R. Winston Roberts, M.D., 300 S. Hawthorne Road, Winston-Salem

Walter C. Humbert, M.D., Box 726, Greenville

John D. Wilsey, III, M.D., 310 W. 4th St., Winston-Salem

Louten R. Hedgpeth, M.D., Box 1081, Lumberton

E. E. Moore, M.D., 706 Flatiron Bldg., Asheville

33. Committee of Physicians on Nursing (8)

Harry L. Brockman, M.D., Chairman, 649 N. Main Street, High Point

Moir S. Martin, M.D., Cherry Street, Mt. Airy

Vernon H. Youngblood, M.D., Rt. 8, Kannapolis-Concord Highway, Concord

Robert W. King, M.D., 107 Bradford Avenue, Fayetteville

William G. Spencer, Jr., M.D., 301 W. End Ave., Wilson

David T. Smith, M.D., Duke Hospital, Durham

W. Reece Berryhill, M.D., U. N. C. Medical School, Chapel Hill

W. D. James, Jr., M.D., Hamlet Hosp., Hamlet

34. **Committee to Study Care and Control of Chronic Illness (8)**
Wm. M. Coppridge, M.D., Chairman, 1200 Broad Street, Durham
J. Street Brewer, M.D., Box 98, Roseboro
John R. Kernodle, M.D., Kernodle Clinic, Burlington
Merle D. Bonner, M.D., Guilford Co. Sanatorium, Jamestown
John L. Winstead, M.D., 1001 E. Fourth St., Greenville
Lenox D. Baker, M.D., Duke Hospital, Durham
Robert J. Reeves, M.D., Duke Hospital, Durham
Melvin Webb, M.D., Webb Clinic, Burnsville
35. **Committee on Archives of Medical Society History (8)**
Ernest W. Furgurson, M.D., Chairman, Plymouth Clinic, Plymouth
John L. Winstead, M.D., 1001 E. Fourth St., Greenville
James B. Bullitt, M.D., Medical Bldg., Chapel Hill
S. Clay Williams, M.D., 1503 Reynolds Bldg., Winston-Salem
Ivan M. Procter, M.D., 209 Hillcrest Road, Raleigh
Charles F. Strosnider, M.D., 111 E. Chestnut Street, Goldsboro
Wilbert C. Davison, M.D., 3701 Duke Hospital, Durham
Frederick R. Taylor, M.D., (Consultant) 1113 Johnson Street, High Point
36. **Reference Committee on Credentials of Delegates to House of Delegates (4)**
Milton S. Clark, M.D., Chairman, 139 W. Walnut St., Goldsboro
Wingate M. Johnson, M.D., 300 S. Hawthorne Road, Winston-Salem
J. Gaddy Matheson, M.D., Box 352, Ahoskie
Edward S. Bivens, M.D., Stanly County Hospital, Albemarle
37. **Committee on General Practitioner Award (9)**
Ben H. Kendall, M.D., Chairman, Shelby Med. Center, Shelby
Roscoe D. McMillan, M.D., Box 232, Red Springs
Joseph A. Elliott, Sr., M.D., 1012 Kings Drive, Charlotte
Edward W. Schoenheit, M.D., 46 Haywood Street, Asheville
E. Reid Bahnson, M.D., 626 S. Main Street, Winston-Salem
George W. Black, M.D., 1516 Harding Place, Charlotte
Wm. A. Sams, M.D., Box BB, Marshall
Bruce B. Blackmon, M.D., Buies Creek
Wayne J. Benton, M.D., 514½ S. Elm Street, Greensboro
38. **Nominating Committee (10)**
Claude B. Squires, M.D., Chairman, Seventh Medical District
403 N. Tryon Street, Charlotte
George W. Holmes, M.D., Secretary, Eighth Medical District
620 Nissen Bldg., Winston-Salem
John A. Payne, III, M.D., First Medical District
Sunbury
C. Fred Irons, M.D., Second Medical District, 1001 E. 4th Street, Greenville
Graham B. Barefoot, M.D., Third Medical District, 10th & Rankin Streets, Wilmington
- A. L. Daughtridge, M.D., Fourth Medical District, 144 Coast Line Street, Rocky Mount
Waylon Blue, M.D., Fifth Medical District, 410 E. Main Street, Sanford
Willard C. Goley, M.D., Sixth Medical District, 214 N. Marshall Street, Graham
Thomas G. Thurston, M.D., Ninth Medical District, 512 Mocksville Avenue, Salisbury
John B. Anderson, M.D., Tenth Medical District, 201 Haywood Bldg., Asheville
39. **Committee on Heart Disease Control (8)**
Elias S. Faison, M.D., Chairman, 1012 Kings Drive, Charlotte
Robert L. McMillan, M.D., 300 S. Hawthorne Road, Winston-Salem
Frank B. Marsh, M.D., 713 Barker Street, Salisbury
Howard H. Bradshaw, M.D., 300 S. Hawthorne Road, Winston-Salem
Glenn E. Best, M.D., Main Street, Clinton
Ernest Craig, M.D., N. C. Memorial Hospital, Chapel Hill
Charles M. Kendrick, M.D., 351 S. Mulberry Street, Lenoir
William A. Anthony, M.D., 155 S. York Street, Gastonia
40. **Committee on Vocational Rehabilitation (7)**
Roy B. McKnight, M.D., Chairman, 403 N. Tryon Street, Charlotte
Harry D. Riddle, M.D., 166 W. Franklin Street, Gastonia
J. Leonard Goldner, M.D., Duke Hospital, Durham
Malory A. Pittman, M.D., Wilson Clinic, Wilson
Charles H. Ashford, M.D., 603 Pollock Street, New Bern
Thomas E. Forbes, M.D., 307 W. Morehead Street, Reidsville
John P. Davis, M.D., 310 W. Fourth Street, Winston-Salem
41. **Advisory Committee to the North Carolina State Board of Welfare (9)**
J. Street Brewer, M.D., Chairman, Box 98, Roseboro
Wm. W. Noel, M.D., Box 37, 309 Wyche St., Henderson
Avon H. Elliot, M.D., State Board of Health, Raleigh
Frederick C. Hubbard, M.D., Box 30, N. Wilkesboro
W. Raney Stanford, M.D., 111 Corcoran Street, Durham
Frank P. Ward, M.D., 501 W. 27th St., Lumberton
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Allyn B. Choate, M.D., 1012 Kings Drive, Charlotte
Jack C. Horner, M.D., Williams Clinic, Spruce Pine
42. **Committee Advisory on School Health and State Coordinating Service (6)**
William T. Rainey, M.D., Chairman, 107 Bradford Avenue, Fayetteville
Charles H. Gay, M.D., 1012 Kings Drive, Charlotte
Amos N. Johnson, M.D., Main Street, Garland
John F. Barber, M.D., 29 N. Market Street, Asheville

- Virgil H. Duckett, M.D., Canton Med. Bldg., Canton
James A. Harrill, M.D., 300 S. Hawthorne Road, Winston-Salem
43. **Committee on Eye Bank (5)**
Wm. Banks Anderson, M.D., Chairman, Box 3802, Duke Station, Durham
J. David Stratton, M.D., 1012 Kings Drive, Charlotte
Alan Davidson, M.D., Box 1313, New Bern
Edward E. Moore, M.D., 706 Flatiron Bldg., Asheville
John D. Wilsey III, M.D., 310 West 4th Street, Winston-Salem
44. **Liaison Committee, State Service Organization on Veterans (2)**
Eben Alexander, M.D., Chairman, 300 S. Hawthorne Road, Winston-Salem
James T. Barnes (Consultant), 203 Capital Club Bldg., Raleigh
45. **Committee on Blood Program (10)**
Paul Kimmelstiel, M.D., Chairman, Charlotte Memorial Hospital, Charlotte
H. Lee Large, Jr., M.D., Presbyterian Hospital, Charlotte
James T. Littlejohn, M.D., 310 New Medical Bldg., Asheville
Forest C. Meade, M.D., 27 E. Center Street, Lexington
Lester A. Crowell, Jr., M.D., Gordon Crowell Hospital, Lincolnton
Thomas N. Lide, M.D., City Memorial Hospital, Winston-Salem
Thomas B. Wilson, M.D., Rex Hospital, Raleigh
Lucille Hutaff, M.D., Bowman Gray School of Medicine, Winston-Salem
Ivan W. Brown, Jr., M.D., Duke Hospital, Durham
Manson Meads, M.D., 300 S. Hawthorne Rd., Winston-Salem
46. **Anesthesia Study Commission (11)**
David A. Davis, M.D., Chairman, Memorial Hospital, Chapel Hill
Charles R. Stephen, M.D., Box 3535, Duke Station, Durham
Roscoe L. Wall, Sr., M.D., 300 S. Hawthorne Road, Winston-Salem
Howard H. Bradshaw, M.D., 300 S. Hawthorne Road, Winston-Salem
J. Deryl Hart, M.D., Box 3704, Duke Station, Durham
Nathan A. Womack, M.D., UNC Medical School, Chapel Hill
Joseph S. Hiatt, Jr., M.D., 208 S. W. Broad Street, Southern Pines
John C. Reece, M.D., Grace Hospital, Morganton
Donald H. Vollmer, M.D., 212 New Medical Bldg., Asheville
Walter T. Tice, M.D., 649 N. Main Street, High Point
C. Hampton Mauzy, Jr., M.D., 300 Hawthorne Road, Winston-Salem
47. **Committee on Scientific Audio-Visual Postgraduate Instruction (9)**
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Amos N. Johnson, M.D., Main Street, Garland
Everett I. Bugg, Jr., M.D., Broad & Englewood Streets, Durham
Louten R. Hedgpeth, M.D., Box 1081, Lumberton
- Jerome O. Williams, M.D., Cabarrus County Hospital, Concord
William P. Richardson, M.D., Memorial Hospital, Chapel Hill
W. Walton Kitchin, M.D., Sampson County Hospital, Clinton
J. Leonard Goldner, M.D., Duke Hospital, Durham
Ernest H. Wood, M.D., N. C. Memorial Hospital, Chapel Hill
48. **Committee Advisory to Student AMA Chapters in North Carolina (3)**
Charles E. Flowers, Jr., M.D., Chairman, N. C. Memorial Hospital, Chapel Hill
Richard T. Myers, M.D., 300 S. Hawthorne Road, Winston-Salem
James P. Hendrix, M.D., Box 3408, Duke Station, Durham
49. **Committee on Medical Golf Tournament (2)**
Kenneth B. Geddie, M.D., Chairman, 641 N. Main Street, High Point
Roscoe L. Wall, Jr., M.D., 405 N. Spring Street, Winston-Salem
50. **Committee Liaison to Study Integration of Negro Physicians into Medical Society of the State of North Carolina (3)**
J. Street Brewer, M.D., Chairman, Box 98, Roseboro
Paul F. Whitaker, M.D., N. Queen Street, Kinston
Ben F. Royal, M.D., Box 628, Morehead City
51. **Committee to Study Medical Education and Medical Care at the House Officer Level (12)**
Russell O. Lyday, M.D., Chairman, 101 N. Elm St., Greensboro
Wilbert C. Davison, M.D., 3701 Duke Station, Durham
Coy C. Carpenter, M.D., 300 S. Hawthorne Road, Winston-Salem
W. Reece Berryhill, M.D., UNC Medical School, Chapel Hill
Graham E. Barefoot, M.D., 10th & Rankin Streets, Wilmington
Millard, D. Hill, M.D., 17 W. Hargett Street, Raleigh
George W. Holmes, M.D., 620 Nissen Bldg., Winston-Salem
Thomas T. Jones, M.D., 604 W. Chapel Hill Street, Durham
Paul W. Sanger, M.D., 1012 Kings Drive, Charlotte
Joshua F. B. Camblos, M.D., 500 New Medical Bldg., Asheville
Hugh A. McAllister, M.D., Med. Arts Bldg., Lumberton
Isaac H. Manning, Jr., M.D., 417 Trust Bldg., Durham
Mr. J. P. Richardson, (Consultant), Presbyterian Hospital, Charlotte
52. **Committee to Study Medical Credit Bureaus (7)**
Moir S. Martin, M.D., Chairman, Cherry Street, Mt. Airy
Frederick K. Garvey, M.D., 300 S. Hawthorne Road, Winston-Salem
Wayne J. Benton, M.D., 514½ S. Elm Street, Greensboro
Roy B. McKnight, M.D., 403 N. Tryon Street, Charlotte
John W. Farthing, M.D., 303 N. 10th Street, Wilmington
W. Howard Wilson, M.D., 403 Professional Bldg., Raleigh

Bruno J. Romeo, M.D., 501 6th Avenue W., Hendersonville
Consultants to be chosen from: 1—Merchants' Asso; 1—Chamber of Commerce; 1—Better Business Bureau

53. **Committee to Study and Determine a Recommendation on Annual Meeting Place for Future Years (includes 1956; 1957; 1958) (9)**
Verling K. Hart, M.D., Chairman, 106 W. 7th Street, Charlotte
Donald B. Koonce, M.D., 408 N. 11th Street, Wilmington
Arthur H. London, Jr., M.D., 306 S. Gregson Street, Durham
J. Street Brewer, M.D., Box 98, Roseboro
Edward W. Schoenheit, M.D., 46 Haywood Street, Asheville
Sidney F. LeBauer, M.D., 101 N. Elm Street, Greensboro
Wm. H. Sprunt, Jr., M.D., 300 S. Hawthorne Road, Winston-Salem
George T. Alexander, M.D., 20 W. Guilford Street, Thomasville
Sanford W. Thompson, Jr., M.D., Civic Center Bldg., Morehead City
54. **Committee to Coordinate Section Programs as to Theme and Arrangement and to Serve as Liaison on Problems in Projecting Annual Session Programs (7)**
James F. Marshall, M.D., Chairman, 310 W. 4th Street, Winston-Salem
Raymond W. Postlethwait, M.D., Parrott Hospital, Kinston
Wm. P. Kavanagh, M.D., Cooleemee
Wm. F. Hollister, M.D., Moore County Hospital, Pinehurst
Roger W. Morrison, M.D., 65 Sunset Parkway, Asheville
Alan Davidson, M.D., Box 1313, New Bern
Ernest H. Wood, M.D., Memorial Hospital, Chapel Hill
55. **Professional Education Committee to the North Carolina Chapter of the American Cancer Society (1)**
George T. Wood, Jr., M.D., 330 Locke St., High Point
56. **Legal Liaison Committee to Work with the North Carolina Bar Association (12)**
T. S. Raiford, M.D., Chairman, 20 Battery Park Avenue, Asheville
R. L. Garrard, M.D., 800 N. Elm Street, Greensboro
John F. Owen, M.D., 511 Professional Bldg., Raleigh
Thomas W. Baker, M.D., 305 Professional Bldg., Charlotte
K. B. Pace, M.D., 412 State Bank Bldg., Greenville
Bennette B. Pool, M.D., 414 Nissen Bldg., Winston-Salem
57. **General Chairman American Medical Education Fund (1)**
Harry L. Johnson, M.D., Box 530, Elkin
(Committees designated for each organized county medical society to function under the general chairman)
58. **Liaison Committee to the North Carolina Pharmaceutical Association (5)**
Paul F. Whitaker, M.D., Chairman, N. Queen Street, Kinston
Roscoe D. McMillan, M.D., Box 232, Red Springs
Charles R. Welfare, M.D., 424 Nissen Bldg., Winston-Salem
Clyde Hedrick, M.D., Box 619, Lenoir
Joseph B. Warren, M.D., Oriental

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Elected in General Session by the Medical Society for nomination to Governor
J. Street Brewer, M.D., (term expires June 30, 1957), Roseboro
William M. Coppridge, M.D., (term expires June 30, 1959), 1200 Broad St., Durham
Harry L. Johnson, M.D., (term expires June 30, 1958), Box 530, Elkin

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John S. Rhodes, M.D., (term expiring June 30, 1956), 700 W. Morgan St., Raleigh
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Donald B. Koonce, M.D., (President-Elect ex officio without vote)

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NORTH CAROLINA MEDICAL JOURNAL

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Duke Hospital, Durham

COUNCILOR DISTRICTS

Constitution and By-Laws of the Medical Society
of the State of North Carolina

Article VI.—Sections and District Societies

The House of Delegates may provide for a division of the scientific work of the Society into appropriate sections, and for the organization of such councilor district societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

Chapter VII.—Councilor Districts

Section 1. To facilitate the more perfect organization of the medical profession, the state of North Carolina is hereby divided by counties into ten councilor districts as follows:

First District—Bertie, Chowan-Perquimans, Gates, Hertford, and Pasquotank-Camden-Currituck-Dare.

Second District — Beaufort, Carteret, Craven, Hyde, Jones, Lenoir, Martin-Washington-Tyrrell, Pamlico, and Pitt.

Third District — Bladen, Brunswick, Columbus, Duplin, New Hanover, Onslow, Pender and Sampson.

Fourth District—Edgecombe-Nash, Greene, Halifax, Johnston, Northampton, Warren, Wayne, and Wilson.

Fifth District—Chatham, Cumberland, Harnett, Hoke, Lee, Moore, Richmond, Robeson, and Scotland.

Sixth District — Alamance-Caswell, Durham-Orange, Franklin, Granville, Person, Vance, and Wake.

Seventh District — Anson, Cabarrus, Cleveland, Gaston, Lincoln, Mecklenburg, Montgomery, Rutherford, Stanly, and Union.

Eighth District—Ashe-Watauga, Forsyth-Stokes, Guilford, Randolph, Rockingham, Surry-Yadkin, and Wilkes-Alleghany.

Ninth District—Avery, Burke, Caldwell, Catawba, Davidson, Iredell-Alexander, and Rowan-Davie.

Tenth District — Buncombe, Cherokee, Graham, Haywood, Henderson, Jackson-Swaim, McDowell, Macon-Clay, Madison, Mitchell-Yancey, Polk, and Transylvania.

1919

1955

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ALPHABETICAL LIST OF FELLOWS FOR 1955 WITH BUSINESS ADDRESS, POSTOFFICE ADDRESS, AND BUSINESS TELEPHONE NUMBER IN INSTANCES SUPPLIED.

The number in small type following each name indicates the county society under which the Fellow is listed in the roster by counties (except Intern-Residency special membership listed at end of alphabetical list)
A key to specialties is to be found at the end of the alphabetical list.

HONORARY MEMBERS

Janet Alexander, M.D.	Agnes Scott College, Decatur, Georgia
Paul V. Anderson, M.D.	Richmond, Va.
R. L. Payne, Jr., M.D.	Norfolk, Va.
William Sharpe, M.D.	Lexington, Ky.
Frank E. Wilson, M.D.	Ph. Sterling 3-8155, 1523 L. St., N. W., Washington 5, D. C.

FELLOWS AND HONORARY FELLOWS

The Fellow's business telephone number immediately precedes his address.
Ph. precedes some telephone numbers which might otherwise be confused as street address.

Abbott, Robert W., P ⁷⁷	State Hospital	Goldsboro
Abernethy, Joseph W., I ¹³	2353—343 2nd St., N. W.	Hickory
Abernethy, Olivia, GP ⁷¹	105—P.O. Box 390, 105 Market St.	Elkin
*Abernethy, Paul McBee, OALR ¹	6-2180—Bailey Coble Bldg.	Burlington
Abse, David Wilfred, P ²³	9031—N. C. Memorial Hospital	Chapel Hill
*Adair, William Edward, Jr., GP ³⁴	2785—Box 578	Erwin
Adams, Anne Stephenson, G ¹⁰	3219—86 Grove St.	Concord
Adams, Carlisle, Pd ⁵⁰	Fr-7-4383—231 N. Torrence Street	Charlotte
Adams, Carlton Noble, ObG ²⁵	6903—428 Nissen Bldg.	Winston-Salem
*Adams, Charles, GP ⁶⁰	4591—109 Penn Avenue	Greenville
*Adams, Fletcher Ruff, Pd ¹⁰	5297—53 S. Union St.	Concord
*Adams, H. Stewart, R ²⁵	4-4421—City Mem. Hosp.	Winston-Salem
Adams, James Robert, Pd ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte
Adams, Powell Evans, GP ⁷⁶	3421	Norlina
Adams, Rayford Kennedy, (Hon.) PN ⁹	1800—Hosp. Branch P. O.	Morganton
Ader, Ottis Ladeau, PH ²³	6716—Health Dept. 300 E. Main St.	Durham
Aderholdt, Marcus L., Jr., PD ³²	6979—608½ N. Main St.	High Point
*Adkins, Troglar Francis, ObG ²³	2-2727—306 S. Gregson St.	Durham
Agner, Marshal Edward, GP ²⁷	6058—107 S. Oak St.	Cherryville
*Agner, Roy A., I ⁶⁶	701 Barker Street	Salisbury
Alderman, A. M., Jr., GP ⁷⁵	3-0853—Bryan Bldg.	Raleigh
*Alderman, Edward H., GP ⁴¹	Drawer P.	Four Oaks
Alexander, Eben, Jr., NS ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Alexander, George Thomas, S ²¹	478—20 W. Guilford St.	Thomasville
Alexander, James Moses, I ⁵⁰	FR 6-4424—1361 E. Morehead St.	Charlotte
†Alexander, James Ramsey, (Hon.) Ret., Ob ⁵⁰	1030 Arrosa Ave.	Charlotte
*Alexander, Joseph Black, I ⁶⁴	3455—14th & Chestnut St.	Lumberton
Alexander, Larry M., GP ⁶⁰	4011—121 W. Power Street	Ayden
*Alexander, Sydenham B., I & Ed ²³	9428—P.O. Box 997, Univ. of N. C.	Chapel Hill
Alexander, William M., T ⁷⁹	7-1121—ENC Sanatorium	Wilson
*Allen, Charles I., Sr. (HON.) S ²	14—220 Morven Road	Wadesboro
*Allen, Charles Insley, Jr., GP ²	430—East View St.	Wadesboro
Allen, George Calvin, OALR ⁶⁴	P.O. Box 981	Lumberton
Allen, Joseph A., (Hon.) GP ⁷⁰		New London
*Allen, John O., GP ⁴⁹	2194—Corner of Main & Railroad Sts.	Marion
Allgood, John W., I ³²	4-2406—113 Price St.	Greensboro
Allgood, Reese Alexander, (Hon.) GP ²⁰		Liberty, South Carolina
Alsop, William B., ALR ²⁵	204 O'Hanlon Bldg.	Winston-Salem
Alyea, Edwin Pascal, U ²³	9011—Duke Hospital	Durham
Ambler, Arthur Chase, (Hon.) Anes ⁸	2-6151—23 Flint St.	Asheville
*Ames, Richard Haight, NS ³²	4-3976—153 Bishop St.	Greensboro
*Anders, McTyeire Gallant, (Hon.) GP ²⁷	5-2731—P.O. Box 1152	Gastonia
*Anderson, Elbert Carl, Oph ⁵⁴	6306—201 N. Front St.	Wilmington
*Anderson, Henry Shaw, GP ⁶⁶	293—222 N. Main St.	Mocksville
*Anderson, John Bascom, S ⁸	2-6314—201 Haywood Bldg.	Asheville
Anderson, Katherine H., Pd ²⁵	3-7440—138 N. Hawthorne Rd.	Winston-Salem
Anderson, Norman LaRue, I & T ⁸	2-4591—86 Victoria Rd.	Asheville
Anderson, Robert A., S ³⁷	2244—405 Colony Ave.	Ahoskie
Anderson, Richard Speight, S ²⁴	Tarboro 8357—Rt. #1	Whitakers

*Present at 1955 meeting

†Deceased

*Anderson, William Banks, Oph ²³	9011—Box 3802 Duke Hospital	Durham
*Andrew, John Montgomery, R ²¹	3237—3½ N. Main St.	Lexington
Andrew, Lacey Allen, Jr., U ²⁵	8075—630 Reynolds Bldg.	Winston-Salem
Andrews, George Alvin, OALR ⁵²	3581—Box 275	Mt. Gilead
Andrews, Leon Polk, I ²³	9-5972—Miller Hall	Chapel Hill
Andrews, Robert Jackson, GP ⁵⁹	2292—P.O. Box 28	Roxboro
*Andrews, Vernon L., GP ⁵²	4411—Box 407	Mt. Gilead
*Angel, Edgar, S ¹⁶	125—Angel Hospital	Franklin
Angel, Furman, (Hon.) S ¹⁶	177—Angel Clinic	Franklin
Angstadt, Charles E., GP ⁷⁵	3-0326—2101 Clark Ave.	Raleigh
Anthony, James Edward, (Hon.) GP ¹⁷	15—137 W. Mountain St.	Kings Mountain
Anthony, William Augustus, C ²⁷	5-3671—155 S. York St.	Gastonia
Antonakos, Theodore, GP ²⁵	7341	Danbury
*Apple, Elbert Dwight, R ³²	2-0636—363 N. Elm St.	Greensboro
*Applewhite, Calvin Crawford, PH ⁷⁵	43611, N. C. State Board of Health	Raleigh
Applewhite, Calvin W., S ³⁹	6118—222 N. Center St.	Statesville
*Arena, Jay Morris, Pd ²³	6-2221—604 W. Chapel Hill St.	Durham
Arey, J. Vincent, ObG ¹	Kernodle Clinic	Burlington
†Armentrout, Charles H., I ⁸	604 City Bldg.	Asheville
Armistead, D. Branch, I ⁶⁰	4131—1001 E. 4th St.	Greenville
Armstrong, Beverly Weller, OALR ⁵⁰	ED 3-1131—106 W. Seventh St.	Charlotte
*Armstrong, Charles Wallace, (Hon.) PH ⁶⁶	3806—Salisbury Health Center	Salisbury
Arney, William Charles, GP ⁹	30—402 S. Sterling St.	Morganton
*Arnold, Jesse Hoyt, Sr., Pd ⁴¹	2040—Kinston Clinic	Kinston
*Arnold, Ralph A., OALR ²³	9011—Box 3069 Duke Hospital	Durham
Arrendell, Cad Walder, Jr., S ⁸	4-2611—509 City Bldg.	Asheville
Ashby, Edward Clayton, (Hon.) Ret., S ⁷¹	370—302 Cherry St.	Mt. Airy
Ashby, Julian Warrington, (Hon.) PN ⁷⁵	7581—State Hospital	Raleigh
Ashe, John Rainey, (Hon.) Pd ⁵⁰	ED 2-4167—1505 Elizabeth Ave.	Charlotte
Ashe, John Rainey, Jr., ObG ⁵⁰	FR 6-1554—1524 Elizabeth Ave.	Charlotte
*Ashford, Charles Hall, S ¹⁹	2231—603 Pollock St.	New Bern
*Atkins, Stanley Sisco, Or ⁸	3-7656—283 Biltmore Ave.	Asheville
*Atkins, William Marshall, GP ⁶	2421—Box 265	Windsor
*Ausband, John Rufus, ALR ²⁵	2-5790—Bowman Gray School of Medicine	Winston-Salem
*Aushman, Howard M., Anes ⁵⁰	ED 3-0141—200 Hawthorne Drive	Charlotte
Austin, DeWitt Rav. (Hon.) I ⁵⁰	3-5628—809 Independence Bldg.	Charlotte
*Austin, Frederick DaCosta, Jr., I ⁵⁰	ED 4-5275—1012 Kings Drive	Charlotte 7
Averett, Leland S., Jr., GP ³²	755 N. Main St.	High Point
Aycock, Edwin Burtis, GP ⁶⁰	2269—500 Dickerson Avenue	Greenville
Aycock, Francis Marion, GP ⁴¹	2751—P.O. Box 56	Princeton
Aycock, James Bernice, R ³⁹	7062—153 E. Broad St.	Statesville
*Ayers, James Salisbury, GP ⁶⁸	2541—Main St.	Clinton
Bacon, Harold Lytle, GP ¹⁰	4555—Branton Bldg.	Bryson City
Baggett, Joseph W., ObG ²⁰	3-3111—911 Hay St.	Fayetteville
Bahnsen, Edward Reid, I ²⁵	4-6151—626 S. Main St.	Winston-Salem
*Bailey, Clarence Whitfield, OALR ²⁴	2-1572—147 N. E. Main St.	Rocky Mount
Bailey, Claude Fletcher, GP ⁵⁸	7535—1502 Carolina Ave.	Elizabeth City
Bailey, Harmon J., ObG ⁸	5684—180 Biltmore Ave.	Asheville
Bailey, Hilda H., Pd ⁶⁶	5883—128½ N. Main St.	Salisbury
Bailey, Joseph P., GP ³⁶	4541—117 Fifth St.	Hendersonville
Bailey, Mercer H., GP ⁵⁸	2793—P.O. Box 366	Elizabeth City
Bailey, Robert Carl, S ¹⁰	4251—1016 N. Church St.	Concord
*Baird, Harry Haynes, U ⁵⁰	ED4-6449—1012 Kings Drive	Charlotte
Baker, Barnwell Rhett, GP ⁸	2-1368—1089 Hendersonville Road	Biltmore
*Baker, Horace Mitchell, Jr., S ⁶¹	3338—Medical Arts Bldg.	Lumberton
*Baker, Lenox Dial, Or ²³	9011, Ext. 5308—Duke University	Durham
*Baker, Roger D., Path ²³	8-1271—V.A. Hospital	Durham
*Baker, Thomas Williams, I ⁵⁰	FR 6-3545—305 Professional Bldg.	Charlotte 2
Baldwin, Marie, P ⁸	Ph. 3-2761—Highland Hosp.	Asheville
*Baldwin, William Edwin, Jr., GP ¹⁸	2230	Whiteville
*Ballew, James Robert, OALR ⁷⁵	5746—504 Prof. Bldg.	Raleigh
Ballou, James Larkin, OALR ³		Grassy Creek
*Balsley, Robert Eugene, Pd ⁶⁵	5211—234 Settle St.	Reidsville
Baluss, John William, Jr., OR ⁶⁴ & ²⁰	2-7090—232 Ray Ave.	Fayetteville
Bangle, James Alexander, (Hon.) GP ¹⁰	6109—Cannon Bldg.	Concord
Banner, Charles Whitlock, (Hon.) Ret., OALR ³²	2-4724—129 N. Elm St.	Greensboro
Barber, John F., ObG ⁸	5991—29 N. Market St.	Asheville
Barden, Graham A., Jr., Pd ¹⁹	4244—414 Johnson St.	New Bern
Bardin, Robert Malcolm, GP ²³	Ph. 2-2101—302 E. Trinity Ave.	Durham
*Barefoot, Graham Ballard (Hon.) R ⁵⁴	9611—10th & Rankin Streets	Wilmington
Barefoot, Julius J., GP ¹⁹	2139—519 Broad St.	New Bern
*Barefoot, Sherwood W., D ³²	3-2581—363 N. Elm St.	Greensboro
Barefoot, Verna Y., GP ¹⁹	2139—519 Broad St.	New Bern
Barefoot, William Frederick, S ¹⁸	2336—7 N. Thompson St.	Whiteville

*Present at 1955 meeting

†Deceased

Barham, Berlin F., GP ⁶²	3117—533 S. Fayetteville St.	Asheboro
Barker, Christopher Sylvanus, (Hon.) GP ¹⁹	2319—711 Broad St.	New Bern
Barkwell John Holloway, GP ⁵⁸	4743—Route 4	Elizabeth City
Barnes, Henry Eugene, Jr., GP ¹³	2-6261—118 5th Ave., N. W.	Hickory
*Barnes, Henry F., GP ⁴⁰	2901	Cullowhee
Barnes, Jesse Thomas, GP ⁶²	5321—125 Sunset Ave.	Asheboro
Barnes, M. Russell, Jr., OALR ⁵⁶	7642—New River Dr.	Jacksonville
Barnes, Margaret Alford, Pd ⁵⁰	ED 4-8551—930 East Blvd.	Charlotte
*Barnes, Robert Henry, P ²³	9011—Duke Hospital.	Durham
Barnett, Thomas B., I ²³	9031—N. C. Memorial Hospital.	Chapel Hill
*Barnhardt, Albert Earl, GP ¹⁰	215 Prof. Bldg.	Kannapolis
Barrett, John Milton, GP ⁶⁰	3445—111 W. Third St.	Greenville
Barrier, Henry Webster, PN ¹⁰	7832	Concord
*Barringer, Archie Lipe, GP ¹⁰	2711—P.O. Box 278.	Mt. Pleasant
*Barringer, Phil Louis, S ⁷³	3-3024—101 S. Hayne St.	Monroe
Barron, John Isaac, GP ⁹	2097—107 Queen St.	Morganton
Barlett, Stephen Russell, Jr., S ⁶⁰	4131—1001 E. 4th St.	Greenville
Bass, Beaty Lee, S ⁶⁷	Rutherford Hospital	Rutherfordton
Bass, Spencer Pippin, (Hon.) GP ²⁴	3114—119 W. St. James Street.	Tarboro
Batten, Hubert E., R ²³	9031—N. C. Memorial Hospital.	Chapel Hill
Batten, Woodrow, I ¹¹	5561 Salerno Rd.	Jacksonville 10, Fla.
Battle, Margaret White, ObG ²⁴	2-2414—521 Peachtree St.	Rocky Mount
*Battle, Newsom Pittman, S ²⁴	2-6181—404 Falls Rd.	Rocky Mount
Baum, Ralph Etheridge, I ²³	2-2035—212 W. Main St.	Durham
Baxley, Raiford Douglas, S ¹⁴	498—101½ E. Raleigh St.	Siler City
Baxter, Oscar Dixon, R ⁵⁰	ED 5-1476—1012 Kings Drive	Charlotte
*Baylin, George Jay, R ²³	9011—Box 3516 Duke Hospital.	Durham
Beach, William R., GP ⁶⁵	234—118 E. Murphy St.	Madison
Beale, Seth M., GP ⁷¹	92—Box 307	Elkin
Beall, Lawrence Lincoln, S ³²	1109 Ninth St.	Greensboro
Beall, Louis Girardeau, (Hon.) PN ⁹	1800—State Hospital.	Morganton
Beam, Lewis Rockwell, Jr., Pd ⁸	3-7364—180 Biltmore Ave.	Asheville
*Bear, Sigmond Aaron, ObG ⁵⁴	3-1611—306 N. 11th St.	Wilmington
*Beard, Grover Cleveland, GP ⁵⁴	8423—Box 37.	Atkinson
Beasley, Edward Bruce (HON), GP ⁶⁰	156	Fountain
*Beavers, Charles L., GP ³²	4-6393—1016 N. Elm St.	Greensboro
Beavers, James Wallace, GP ³²	1016 N. Elm St.	Greensboro
*Beavers, William Olive, GP ³²	4-6393—1016 N. Elm St.	Greensboro
Beck, J. Montgomery, U ¹	4428—328 W. Davis St.	Burlington
Becknell, George F., GP ⁶⁷	3838—407 S. Broadway	Forest City
Beckwith, Robert Payne, (Hon.) GP ³³	7-3703—10th Street	Roanoke Rapids
Beddingfield, Edgar Theodore, Jr., GP ⁷⁹	2691—P.O. Box 137.	Stantonsburg
Belcher, Cecil Cullen, U ⁸	2-6321—Box 7205, 608 City Bldg.	Asheville
Belk, George W., (Hon.) GP ²⁷	403 W. 6th St., South	Gastonia
*Bell, George Erick, (Hon.) GP ⁷⁹	7-1182—Cor. Green & Douglas St.	Wilson
Bell, Ira Eugene, R ⁹	3869—18 Thirteenth Ave., N. E.	Hickory
Bell, J. C., (Hon.) GP ⁴²	614 Main St.	Maysville
Bell, L. Nelson, S ⁸	8551—42 College Park Place	Asheville
Bell, Orville Earl, GP ²⁴	6-8126—224 Rose St.	Rocky Mount
Bell, Ralph Monroe, I ⁵⁰	ED 2-1681—1012 Kings Drive	Charlotte 7
*Bell, Spencer Alexander, GP ⁷¹	14 F004, Box 33	Hamptonville
Bell, William Harrison, Jr., R ¹⁹	3321—P.O. Box 1298	New Bern
Bellamy, Robert Hartlee, (Hon.) GP ⁵⁴	612 Princess St.	Wilmington
*Bellows, Rowland Thompson, NS ⁵⁰	ED 2-0618—1012 Kings Drive	Charlotte
*Benbow, Edgar Vernon, S ²⁵	6712—631 Nissen Bldg.	Winston-Salem
Benbow, Edward Perry, Jr., Pd ³²	2-4187—140 E. Northwood St.	Greensboro
Benbow, John Thomas (HON), GP ²⁵		East Bend
*Bender, John Joseph, GP ⁶⁴	2621—Box 630	Red Springs
*Bender, John Robert, GP ²⁵	7002—820 Nissen Bldg.	Winston-Salem
*Bennett, Ernest Claxton, GP ^{64 and 7}	3071—Box 295	Elizabethtown
Bennett, Herron Kent, GP ⁵²	25 Bridges Loop, Apt. 58	McDill AFB, Fla.
Bennett, John Northwood, R ⁷⁸	958-J—Route 4	N. Wilkesboro
*Bensen, Vladimir Basil, GP ⁷⁵	3-6223—422 St. Mary's St.	Raleigh
Benson, John F., I ³²	4342—330 Lock St.	High Point
Benson, Norman Oliver, U ⁶⁴	5663—206 E. Fifth St.	Lumberton
Benton, George Ruffin, Jr., S & G ⁷⁷	900—Ash & Herman Streets.	Goldsboro
*Benton, Wayne Jefferson, GP ³²	2-4342—514½ S. Elm St.	Greensboro
*Berkeley, Alfred Rives, Jr., Or ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte 2
*Berkeley, Wm. Thomas, Jr., PL ⁵⁰	FR 5-5926—1012 Kings Drive	Charlotte
Berry, Francis X., ObG ³²	4-7815—823 N. Elm St.	Greensboro
Berry, James William, GP ⁵¹	Ph. 2331	Bakersville
*Berryhill, Walter Reece, I & Ed ²³	7266—Univ. of N. C. Medical School	Chapel Hill
Bertling, Marion Henry, ObG ³²	8740—416 Jefferson Bldg.	Greensboro
Best, Deleon Edward, GP ⁷⁷	21—Prof. Bldg., 139 W. Walnut St.	Goldsboro
*Best, Glenn Eben, GP ⁶⁸	2747—Main Street	Clinton
*Best, James Ernest, Pd ³²	3-9368—1008 N. Elm St.	Greensboro

*Present at 1955 meeting

Betha, Thad, GP ¹⁸	25	Fair Bluff
Bethel, Millard Baimbridge, PH ⁵⁹	FR 5-5754-615 E. 4th St.	Charlotte
Bever, Christopher T., P ²³	9031-N. C. Memorial Hospital	Chapel Hill
Biggs, Dennis W., Jr., GP ⁶¹	6989-P.O. Box 872	Lumberton
*Biggs, John Irvin, S & Or ⁶¹	5318-208 E. 14th St.	Lumberton
*Bigham, Roy Stinson, Jr., P ⁵⁰	ED 4-5531-412 N. Church St.	Charlotte 2
*Billings, Gilbert M., (Hon.) OALR ⁹	7-405 S. Sterling St.	Morganton
Bingham, William Louis, GP ²¹	2741-15 E. Center St.	Lexington
*Bird, Ignacio, R ³²	2-2101-Wesley Long Hospital	Greensboro
Bisanar, J. M., Pd ¹³	U. S. Army Dispensary, Ft. Myer	Arlington 11, Va.
Bitting, Numa Duncan, (Hon.) S ²³	212 W. Main St.	Durham
*Bittinger, Charles Lewis, GP ³⁹	2-1801-146 E. McLelland Ave.	Mooreville
Bittinger, Isabel, Or ²⁵	3-1736-118 S. Cherry St.	Winston-Salem
*Bittinger, Samuel Moffett, (Hon.) P ¹⁸	78-6711-Box 906	Black Mountain
Bittle, Charles R., GP ¹⁶	3685-P.O. Box 292	Highlands
*Bivens, Edward Shirley, R ⁷⁹	1300-Stanly County Hospital	Albemarle
Bizzell, James W., Oph ⁷	32-Box 711	Goldsboro
Bizzell, Marcus Edward, OALR ⁷⁷	229-Box 35	Goldsboro
*Black, George William, (Hon.) GP ⁵⁰	ED 4-4603-1516 Harding Place	Charlotte
Black, John Riley, Jr., GP ¹⁸	3080-P.O. Box 126	Whiteville
Black, Oscar Reid, (Hon.) GP ⁶⁶	China Grove 44W-Box 286	Landis
*Black, Paul Adrian Lawrence, OALR ⁵¹	2-2026-419 Chestnut St.	Wilmington
*Blackley, Roy Jackson, GP ⁶³	123-State Hosp.	Butner
*Blackmon, Bruce Bernard, GP ³¹	5061	Buies Creek
Blackshear, Thomas Joseph, Jr., (Hon.) OALR ⁷⁹	2779-113 E. Nash St.	Wilson
*Blackwelder, Verne Hamilton, S ¹¹	Plaza 4-3451-Blackwelder Hospital	Lenoir
Blair, George Walker, Jr., P ¹¹	6-2378-328 W. Davis Street	Burlington
Blair, J. Samuel, Ob ²⁷	5-4271-210 S. York St.	Gastonia
Blair, James Seaborn, Jr., GP ²²	5861-P.O. Box 91	Wallace
Blalock, Floyd E., GP ¹⁵	126-2nd & Locust St., Box T	Andrews
*Blanchard, George C., NS ⁵⁰	ED 4-5587-1012 Kings Drive	Charlotte
Blanchard, Irvin T., GP ⁵⁸	7183-207 Kramer Bldg.	Elizabeth City
Blanchard, Thomas W., (Hon.) GP ²⁸	2142-Box 5	Hobbsville
Bland, William Herbert, GP ⁷⁵	3611-Box 477	Cary
Bliss, Forrest Edgar, GP ¹⁷	7233-Drawer G	Lawndale
Block, Milton Edward, GP ²¹	3283-522 S. State St.	Lexington
Bloor, Byron Michal, N ²³	1409 Broad Street	Durham
*Blount, Frederick A., Pd ²⁵	4-7841-4th St. at Spring	Winston-Salem
Blowe, Ralph Boyd, GP ³³	9-346-800 Washington Ave.	Weldon
Blue, John F., GP ¹³	4-1751-223 Carthage St.	Sanford
*Blue, Waylon, GP ⁴³	2-2031-410 E. Main St.	Sanford
Bogdonoff, Morton David, P ²³	1840 Forrest Road	Durham
Boice, Edmund Simpson, (Hon.) S ²¹	2-6181-Park View Hospital	Rocky Mount
Bolin, Grover Cleveland, Jr., R ¹¹	3171-423 Hancock St.	Smithfield
Bolin, Paul, GP ²²	2301	Beulaville
Bolt, Conway Anderson, GP ⁷³	Box 368	Marshville
Bolus, Michael, D ⁷⁵	6453-334 Professional Bldg.	Raleigh
Bond, George F., GP ³⁶	Valley Clinic & Hospital	Bat Cave
Bond, John Pennington, S ²⁷	5-2340-155 S. York St.	Gastonia
Bond, Vernard F., Jr., P ²⁵	4-0181-710 Nissen Bldg.	Winston-Salem
Bonner, John Bryan, (Hon.) GP ⁵	2501-Main St., Box 116	Aurora
Bonner, John Bryan Havens, GP ⁵⁸	2289-224 Carolina Bldg.	Elizabeth City
† Bonner, Kemp Plummer Battle, (Hon.) GP ¹²	6-3222-1601 Arendell St.	Morehead City
Bonner, Mack Stuart, GP ³⁹	3071	Troutman
*Bonner, Merle Dumont, T & A ³²	High Point, 5-1288— Guilford County Sanatorium	Jamestown
*Bonner, Octavius Blanchard, (Hon.) OALR ³²	8052-649 N. Main St.	High Point
Boone, Alex W., Jr., U ²³	9011-Duke Hospital	Durham
Boone, John W., Jr., GP ³³	600 Roanoke Ave.	Roanoke Rapids
*Boone, William Waldo, (Hon.) GP ²³	1001 Gloria Ave.	Durham
Booth, J. H. R., R ⁵⁸	Albemarle Hospital	Elizabeth City
Bosien, Marian K., Anes ⁶¹	143-Box 335	Tryon
Bosien, William R., S ⁶¹	143-Box 335	Tryon
*Bost, Thomas Creasy, (Hon.) S ⁵⁰	3-1221-810 Prof. Bldg.	Charlotte
Bostic, William Chivous, (Hon.) GP ⁶⁷	5121-Box 215	Forest City
*Bostic, William Chivous, Jr., GP ⁶⁷	5121-Box 215	Forest City
*Bowen, James Poore, GP ⁵³	8221-117 W. Main St.	Aberdeen
Bower, Joseph S., P ¹⁴	2931-Box 12	Pink Hill
*Bowles, F. Norman, ObG ²³	2-2727-306 S. Gregson St.	Durham
Bowles, Richard M., Pd ¹⁷	Children's Clinic	Shelby
*Boyce, Oren Douglas, P ²⁷	5-3181-406 S. Chester St.	Gastonia
*Boyce, William H., U ²⁵	2-2943-Bowman Gray	Winston-Salem
Boyd, Joseph Alston, R ⁷¹	4414-409 Chestnut St.	Henderson
*Boyer, George Norman, Ind ⁷²	Tn 3-3211—Ecusta Paper Corp.	Pisgah Forest

Boyette, Dan P., Pd ³⁷	2833—217 W. Main St.	Ahoskie
Boyles, Wayne F., GP ¹⁷		Lawndale
*Brabson, John Anderson, S ⁵⁰	ED 3-0611—1627 ¹ / ₂ Elizabeth Ave.	Charlotte
Bradford, George Edwin, ALR ³⁵	2-3542—307 Nissen Bldg.	Winston-Salem
Bradford, Wallace Brown, ObG ⁵⁰	ED 2-8579—1509 Elizabeth Ave.	Charlotte
Bradford, Williamson Ziegler, ObG ⁵⁰	ED 2-8579—1509 Elizabeth Ave.	Charlotte
*Bradley, Harold John, U ²³	4-1203—153 Bishop St.	Greensboro
*Bradley, Jeter Carroll, OALR ^s and 47	2211—P.O. Box 327	Weaverville
*Bradley, John David, PN ^s	2-6381—803 City Hall Bldg.	Asheville
*Bradshaw, Howard Holt, S ²⁵	4-6361—Bowman Gray Sch. of Medicine	Winston-Salem
†Bradshaw, Thomas Gavin, GP ⁷⁹	Route 2	Wilson
*Bradsher, Arthur B., S ²³	3-0491—604 W. Chapel Hill St.	Durham
Bradsher, James Donald, GP ⁵⁹	6841—Box 168	Roxboro
Bradsher, James Sidney, Jr., GP ³⁰	2023—Box 83	Stovall
Brady, Charles Eldon, GP ⁵³	4811	Robbins
*Brady, Walter Morris, GP ¹²	6-3252—1015 Arendell St.	Morehead City
Branaman, Guy Hewitt, Jr., ObG ⁷⁵	3-7021—500 St. Mary's St.	Raleigh
Brandon, Henry Allen, GP ⁷¹	3651	Yadkinville
Brandon, James Robert, Or ⁵⁴	4381—308 N. 3rd St.	Wilmington
Brandon, Wesley Otis, GP ¹⁰	4246	Concord
Brandon, William Rockwell, ALR ³⁹	5122—West Bldg.	Statesville
Brantley, Julian Chisolm, Sr., (Hon.) GP ²⁴	2631—P.O. Box 206	Spring Hope
Brantley, Julian Chisolm, Jr., ObG ²¹	2-4134—410 Peachtree Street	Rocky Mount
Brantley, Julian Thweatt, ObG ³²	4-0740—1018 N. Elm St.	Greensboro
Brantly, Clayton, I ²³	9-3682—111 Corcoran Street	Durham
*Brashear, H. Robert, Or ²³	9031—N. C. Memorial Hospital	Chapel Hill
Bray, Thomas Latham, (Hon.) GP ⁴⁸	2861—Box 576	Plymouth
*Bream, Charles Anthony, R ²³	9031—UNC School of Medicine	Chapel Hill
*Breedon, William Henry, Pd ²⁰	2-6151—1606 Morganton Rd.	Fayetteville
Brenizer, Addison Gorgas (Hon.) S ⁵⁰	1012 Kings Dr.	Charlotte
*Brenizer, Addison G., Jr., S ⁵⁰	FR 5-5005—1012 Kings Drive	Charlotte
*Brewer, James Street, (Hon.) GP ⁶⁸	2171—P.O. Box 98	Roseboro
Brewton, William Allan, I ^s	3-6711—5 Lake Drive	Enka
*Brian, Earl Winfrey, I ⁷⁵	8147—127 W. Hargett St.	Raleigh
*Bridger, Clarence Edgerton, GP ⁶⁴ and 7	2-721—Box 428	Bladenboro
*Bridger, Dewey Herbert, (Hon.) GP ⁷	2186	Bladenboro
*Bridges, Dwight Thomas, GP ¹⁷	2296	Lattimore
*Briggs, Henry Harrison, Jr., Oph ^s	2-3471—611 City Bldg.	Asheville
Brigman, Paul H., GP ³²	755 N. Main St.	High Point
*Brinkhous, Kenneth Merle, Ed & Path ²³	9-1716—UNC Med. School, Box 1020	Chapel Hill
*Brinn, Thomas Preston, GP ¹⁶	2421—25 Market St.	Hertford
*Bristow, Charles Oliver, (Hon.) GP ⁶³	P.O. Box 483	Rockingham
*Britt, James Norment, (Hon.) GP ⁶⁴	4624—Elm St. & 4th St.	Lumberton
Britt, Tilman Carlisle, Jr., GP ⁷¹	2350—216 Grade St.	Mt. Airy
Brittman, Lowell Ellis, GP ⁵⁰	Trinity 5-6777—Box 275	Huntersville
Brock, Julian Stanley, I ²⁴	2-5121—144 Coast Line St.	Rocky Mount
*Brockmann, Harry Lyndon, (Hon.) S ³²	7924—649 N. Main St.	High Point
*Brooks, Ernest Bruce, I ²⁵	2-1916—514 Reynolds Bldg.	Winston-Salem
*Brooks, Frederick Philips, I ⁶⁰	2707—525 Evans St.	Greenville
Brooks, Harry Eskridge, GP ⁷⁹	ENC Sanatorium	Wilson
Brooks, James Taylor, I ³²	3-8658—1100 N. Elm St.	Greensboro
Brooks, Jean Bailey, ObG ³²	3-8658—1100 N. Elm St.	Greensboro
*Brooks, Ralph Edward, (Hon.) U ¹	7471—1308 Rainey St.	Burlington
*Brooks, William Lester, Jr., I ⁵⁰	ED 4-1649—211 Hawthorne Lane	Charlotte
Broughton, Arthur Calvin, Jr., I ⁷⁵	2-2953—133 Fayetteville St.	Raleigh
Broun, Matthew Singleton, (Hon.) OALR ³³	7-7511—606 Roanoke Ave.	Roanoke Rapids
Brouse, Ivan Edwin, R ⁵¹	9611—James Walker Memorial Hosp.	Wilmington
Brown, Alan Reid, R ³⁵	GL 6-4611—Haywood County Hosp.	Waynesville
Brown, Charles William, ObG ⁵⁰	ED 2-1516—1521 Elizabeth Ave.	Charlotte
Brown, Clarence Emanuel, (Hon.) GP ⁶⁶	Crescent 3715—Box 96	Faith
*Brown, Frank Reid, I ³²	3-2582—363 N. Elm St.	Greensboro
Brown, Gerald J., GP ²⁵		Westfield
Brown, Ivan W., Jr., S ²³	9011—Duke Hospital	Durham
Brown, James Arthur, GP ⁶⁶	2681—Main St.	Cleveland
Brown, James Stevens, Sr., (Hon.) GP ³⁶	4322—N. Church St.	Hendersonville
Brown, James Walter, Jr., ALR ¹⁰	2-4621—205 Cabarrus Bank Bldg.	Kannapolis
Brown, Kermit English, ObG ⁸	506 Flatiron Bldg.	Asheville
Brown, Landis Gold, S ⁵⁴	2461	Southport
Brown, Victor Emanuel, GP ⁴⁸	2127—Brown Community Hosp.	Williamston
Brown, William Moye Benjamin, OALR ⁶⁰	2061—State Bank Bldg.	Greenville
*Brown, William T., S ⁶⁹	Scotland County Mem. Hosp.	Laurinburg
*Brownsberger, Ethel May, GP ^s	8981—75 Hendersonville Rd.	Biltmore
Brunson, Edward Porcher, S ⁷⁰	913—120 W. North St.	Albemarle
*Bruton, Charles Wilson, GP ⁵²	2871—Box 27	Troy
*Bryan, A Hughes, PH ²³	5182—School of P. H.	Chapel Hill

*Present at 1955 meeting

†Deceased

Buchanan, Luther Thomas, (Hon.) Ret. GP ⁶³	70-9282—	
Buckner, Frank W., S ¹	2325 Sunrise Dr., S. E.	S. Petersburg, Fla.
Buffalo, J. S., (Hon.) GP ⁷⁵	Grace Hospital	Banner Elk
*Bugg, Charles Richard, Pd ⁷⁵	2-0587—627 W. Jones St.	Garner
*Bugg, Everett L., Jr., Or ²³	8-1240—Broad and Englewood	Raleigh
Buie, Roderick Mark, Sr., (Hon.) PH ³²	119 Kensington Rd.	Durham
Buie, Roderick Mark, Jr., I ³²	4-6986—113 Price St.	Greensboro
*Bulla, Alexander Chester, (Hon.) PH ⁷⁵	3-1685—201 W. Davie St.	Greensboro
*Bullard, George M., GP ¹	3-3161—Mebane Clinic	Raleigh
Bullard, Lubin Fletcher, Jr., GP ⁶⁸	Box 14	Mebane
*Bullitt, James Bell, (Hon.) Ret., Path ²³	9-1716—Medical Bldg.	Garland
*Bullock, Duncan Douglas, Sr., GP ⁶⁴	3323—6 E. Main Street	Chapel Hill
Bumgarner, James, GP ⁷⁸	3514W	Rowland
Bumgarner, John R., I ⁸	8411—WNC Sanatorium	Millers Creek
Bunce, Paul Leslie, U ²³	9031—N. C. Memorial Hosp.	Black Mountain
Bunch, Charles, S ⁵⁰	3-6634—U. S. Naval Security Office, Fed. Bldg.	Chapel Hill
Bundy, William Lumsden, I ⁷⁸	387	Raleigh
Bunn, David Glenn, GP ¹⁸	2016	N. Wilkesboro
*Bunn, Justus J., (Hon.) GP ¹⁰	3491—Box 96	Whiteville
Bunn, Richard Wilmot, Ind ²⁵	7171—Reynolds Tobacco Co.	Mt. Pleasant
Burch, William H., GP ³⁶	Lake Lure 3131—Valley Clinic & Hosp.	Winston-Salem
*Burdette, Fred McPherson, Jr., GP ⁵⁴	2721—Box 398	Bat Cave
Burleson, Robert Joe, OR & S ⁸	3-7656—283 Biltmore Ave.	Southport
Burleson, William Brown, (Hon.) GP ⁴	Poplar 5-2628	Asheville
Burnett, Charles Hoyt, I ²³	9031—N. C. Memorial Hosp.	Plumtree
Burnette, Harvey Loraine, Jr., GP ²	64—Box 143	Chapel Hill
Burnette, Howard O., GP ⁶²	3312—Main St.	Morven
Burns, Joseph Eugene, GP ¹⁰	3244—Cabarrus Bank Bldg.	Randleman
*Burns, Margaret Virginia, I ⁸	1800—State Hospital	Concord
*Burns, Stanley Sherman, OALR ⁵⁰	ED 3-1131—106 W. Seventh St.	Morganton
Burt, Richard L., ObG ²⁵	4-6361—Bowman Gray Sch. of Med.	Charlotte
Burt, Samuel Perry, (Hon.) Ret., GP ²⁶	263-1—P.O. Box 238	Winston-Salem
Burwell, John Cole, Jr., ObG ³²	8740—101 N. Elm St.	Louisburg
Burwell, Walter Brodie, I ⁷⁴	5619—317 Orange St.	Greensboro
Busby, George Francis, S ⁶⁶	863—Box 1279, 901 W. Henderson St.	Henderson
Busby, Julian, GP ¹⁰	6121—Prof. Bldg.	Salisbury
Busby, Julian Goode, (Hon.) Pr & D ⁶⁶	863—901 W. Henderson St.	Kannapolis
Busby, Trent, ObG ⁶⁶	863—901 W. Henderson St.	Salisbury
*Busse, Ewald W., PN ²³	9011—Duke Hospital	Salisbury
*Butler, C. J., GP ¹¹	3621—Box 436	Durham
Butler, Leroy Jefferson, (Hon.) Pd ²⁵	4-6361—608 Summit St.	Four Oaks
Butler, Radford N., I ²⁵	4-9441—504 O'Hanlon Bldg.	Winston-Salem
Byerly, Claude H., GP ¹⁴	214—107 S. Chatham Ave.	Winston-Salem
Byerly, Frederick Lee, T ²⁵	4-7431—Nissen Bldg.	Siler City
*Byerly, James Hampton, GP ⁴³	3-3021—140 N. Steele St.	Winston-Salem
Byerly, Wesley Grimes (Hon.) OALR ¹¹	PL 4-5340—105 N. Boundry St.	Sanford
*Byrd, Charles William, GP ³¹	2137—119 Lucknow Square	Lenoir
Byrd, William Carey, Hosp Ad ⁹	State Hospital	Dunn
Byrnes, Thomas Henderson, Path ⁵⁰	2-0635—612 Prof. Bldg.	Morganton
Byrum, Clifford C., GP ⁵	C/o St. Elizabeth Hospital	Charlotte 2
		Lafayette, Ind.
Caddell, H. Morris, GP ⁵³		Aberdeen
Calder, Duncan Graham, Jr., S ¹⁰	2186—Ardsley Rd.	Concord
Caldwell, Eston Robert, Jr., I ³⁹	9086—709 W. End Ave.	Statesville
*Caldwell, Jesse, Jr., ObG ²⁷	5-2147—114 W. Third Ave.	Gastonia
Caldwell, Lawrence McClure, GP ¹³	124—East 1st St.	Newton
Caldwell, Robert Manfred, GP ⁷¹	76—224 S. Main St.	Mt. Airy
*Callaway, Jasper Lamar, D ²³	9011—Duke Hospital	Durham
Calvert, Samuel J., I ³⁷	2286—407 Colony Avenue	Ashoke
Camblos, Joshua Fry Bullitt, S ⁸	2-2568—500 New Med. Bldg.	Asheville
*Cameron, Charles M., Jr., PH ⁷⁵	4-3611—N. C. State Board of Health	Raleigh
Cameron, Joseph Harold, GP ²⁷	5-8436—1514 E. Ozark Ave.	Gastonia
Camp, Edward Hays, S ⁸	2-6442—247 Charlotte St.	Asheville
Campbell, Paul C., Jr., D ²⁰	2-8474—327 Ray Ave.	Fayetteville
*Cann, William Silas, PH ⁶	4061—Bertie County Health Dept.	Windsor
*Cannon, Eugene Bolivia, Pd ⁶²	4229—151 N. Fayetteville St.	Asheboro
*Cannon, William Maurice, Path ⁵⁴	9611—James Walker Memo. Hosp.	Wilmington
Cardwell, Willard, I & C ³²	3116—153 Bishop St.	Greensboro
Carlton, Romulus Lee, (Hon.) Ret., PH ²⁵	2211 Elizabeth Ave.	Winston-Salem
Carpenter, Coy Cornelius, Path ²⁵	4-6361—Bowman Gray Sch. of Medicine	Winston-Salem
Carpenter, Forest LaFon, Jr., S ³⁹	H. F. Long Hosp.	Statesville
*Carpenter, Kenneth Carrington, GP ¹¹	Plaza 4-7861—P.O. Box 635	Lenoir

*Present at 1955 meeting

Carpentieri, Joseph, P ⁷⁵	4-7662—2011 Clark Ave.	Raleigh
*Carr, Chalmers, R., Or ⁵⁰	123 W. 7th St.	Charlotte
*Carrington, George Lunsford, S ¹	7471—Piedmont Way at Rainey	Burlington
Carroll, Fountain Williams, GP ³¹		Hookerton
Carroll, Rubyetta Charman, P ⁸	3-2761—Highland Hosp.	Asheville
Carson, Jack Oliver, GP ²⁴	Box 387	Spring Hope
Carter, Francis Bayard, ObG ²³	9011—Duke Hospital	Durham
*Carter, Warren Dallas, GP ²	388—P.O. Box 235	Wadesboro
*Castevens, John Claude, Hosp Ad & S ²⁵	9679—514 Stratford Rd.	Winston-Salem
Castelloe, Cola, GP ⁶	2966—Box 396	Windsor
Cater, Clinton Duncan, (Hon.) Ob ³²	2-2345—324 Jefferson Bldg.	Greensboro
Cates, Banks R., Jr., I ⁵⁰	FR 7-4578—1012 Kings Drive	Charlotte
Cathell, Edwin Jennings, S ²¹	2379—16 W. First Ave.	Lexington
*Cathell, James L., P ³⁰	Creedmoor 2211—State Hospital	Butner
*Caveness, Zebulan Marvin, (Hon.) Pr ⁷⁵	5387—116 Woodburn Rd.	Raleigh
*Caviness, Verne Strudwick, I & C ⁷⁵	2-2786—109 N. Boylan Ave.	Raleigh
*Cayer, David, GE ²⁵	4-6361—Bowman Gray Med. Sch.	Winston-Salem
Cekada, Emil Bogomir, I ³³	2-2371—602 W. Chapel Hill St.	Durham
*Chamberlin, Harrie R., Pd ²³	9031—UNC Sch. of Med.	Chapel Hill
*Chamblée, John Sigma, PH ²⁴	3471—Nash County Health Dept.	Nashville
Chambliss, John Randolph, I ²⁴	2-6181—404 Falls Rd.	Rocky Mount
Chandler, Weldon P., GP ⁸ and 47	2421—P.O. Box 386	Weaverville
Chapin, John H., GP ⁴¹	2446—Box 151	Benson
Chapman, Edwin James, ALR ⁸	2-1651—46 Haywood St.	Asheville
Chapman, Jesse Pugh, Jr., S ⁸	New Med. Bldg.	Asheville
Charlton, John D., A ³²	Ph. 5-7641—823 N. Elm. St.	Greensboro
Chastain, Loren L., GP ²⁷	6243—106 W. First St.	Cherryville
*Cheek, John Merritt, Jr., S ²³	4-3711—306 S. Gregson St.	Durham
*Cheek, Kenneth Maurice, I ³²	6929—321 Richardson St.	High Point
Cheek, Thomas Sidnev, I ⁴¹	2310	Smithfield
Chesley, Norman K., GP & I ¹⁸	Wilmington 3-1666—Box 68, Reigelwood	Acme
Chesson, Andrew Long, S ⁷⁵	3-2390—223 Bryan Bldg.	Raleigh
*Chester, Pinkney Jones, (Hon.) OALR ⁵³	2-5002—W. Broad St.	Southern Pines
Cheves, William Grey, GP ²⁶	3981—12 N. Main St.	Franklinton
Chipman, Sidnev S., Pd & PH ²³	9-2388—405 Collidge St., Box 229	Chapel Hill
*Choate, Allyn Blythe, I & C ⁵⁰	2-5011—1012 Kings Drive	Charlotte
*Choate, Glenn, (Hon.) GP ⁶⁶	120—Wallace Bldg.	Salisbury
Choate, James Walter, (Hon.) GP ⁶⁶	127—400 Wallace Bldg.	Salisbury
Citron, David Sanford, I ⁵⁰	FR 6-0290—1012 Kings Dr.	Charlotte
Clapp, Hubert Lee, GP ⁸	3671—Box 145	Swannanoa
Clark, Badie Travis, S ⁷⁹	6135—103 N. Pine St.	Wilson
*Clark, DeWitt Duncan, (Hon.) GP ⁷ and 64	2381—Box 725	Clarkton
*Clark, Douglas Hendon, S ⁶⁴	3338—14th & Chestnut St.	Lumberton
Clark, Harold Stevens, (Hon.) S ⁸	2-3110—29 N. Market St.	Asheville
Clark, Henry T., Jr., Ed ²³	9015—Box 1370	Chapel Hill
*Clark, Milton Stephen, GP ⁷⁷	84—139 W. Walnut St.	Goldsboro
Clarke, James Sabrit, Pd ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte
Clarke, Len Gordon, GP ⁶⁵	Meadow 5-5121—122 Mill Ave.	Draper
Clarke, William Lowe, Jr., GP ¹³	4677—829 8th Ave., N. E.	Hickory
*Clary, William Thomas, ObG ³²	2-5203—228 Jefferson Bldg.	Greensboro
Clay, Earl Lewis, GP ³⁰	3147—Odd Fellow Bldg.	Oxford
Clay, Thomas Barger, Jr., GP ⁶⁵	22 Bender Ct., Deep Creed Blvd.	Portsmouth, Va.
Clayton, Eugene C., GP ⁸	2-2413—404 City Bldg.	Asheville
Clayton, Milton Burns, OALR ³⁹	National 8-4460—15th & K St., N. W., 778 Sou. Ry. Bldg.	Washington 5, D. C.
*Cleaver, H. DeHaven, S ²³	8-1245—1202 Broad St.	Durham
*Cleek, Thornton R., GP ⁶²	2135—213 S. Fayetteville St.	Asheboro
Cliff, Benjamin Franklin, (Hon.) GP ⁴¹	5211—Box 277	Benson
Cline, Wayne A., U ⁶⁶	1913—909 W. Henderson St.	Salisbury
†Clinton, Roland Smith, (Hon.) GP ²⁷	P.O. Box 21, 242 E. Main Street	Gastonia
Cloninger, Charles Edgar, GP ¹³	800—P.O. Box 245	Conover
Cloninger, Kenneth Lee, ALR ¹³	865—Catawba Hosp., Inc.	Newton
Cloninger, Rowell C., S ¹⁷	9931—Box 1198	Shelby
Clyatt, Claude Eugene, (Hon.) GP ²¹	36 M—Box 123	Denton
Cobb, Donnell Borden, S ⁷⁷	94—401 N. Herman St.	Goldsboro
Cochcroft, R. L., GP ²⁷	9-2551—E. Pa. Avenue	Bessemer City
Cochran, John L., GP ⁶²	3152—149 McArthur Street	Asheboro
Cochran, James Daniel, (Hon.) GP ¹³	220—Box 468, 1 East A. St.	Newton
*Cochrane, Fred Richard, Pd ⁵⁰	4-3031—1361 E. Morehead St.	Charlotte
Codington, Herbert Augustus, (Hon.) S & G ⁵⁴	2-3665—507 Murchison Bldg.	Wilmington
Codnere, John T., U ⁸	3-4283—400 City Hall Bldg.	Asheville
Coffee, Archie T., Jr., N ⁵⁰	FR 5-5663—1012 Kings Drive	Charlotte
Coffey, James Cecil, GP ⁶⁶	270—130 N. Main St.	Salisbury
Coffey, Robert T., GP ³²	8258—1601 Cornwallis Drive	Greensboro
Coffman, Selby Evans, Jr., GP ⁶⁰	2231	Grafton
Cogdell, David Melvin, ObG ³⁰	3-3111—911 Hay Street	Fayetteville

*Present at 1955 meeting

†Deceased

Cohn, Jerome E., I ²³	Bellevue Hosp.	New York City
Cole, Herman A., GP ⁴¹	3946—Box 216	Clayton
Cole, Walter Francis, (Hon.) Or ³²	101 N. Elm St.	Greensboro
Cole, Walter Franklin, GP ²⁶	418-5—Box 6	Bunn
Coleman, Julian B., GP ¹		Saxapahaw
Coleman, Lester Livingston, GP ⁹	9-2571—P.O. Box 76	Hildebran
Coley, Elwood B., Pd ⁷⁴		Henderson
Collett, James R., I ⁹	222 W. Union St.	Morganton
Collings, Ruth Mary, GP ³²	3-8467—Woman's College, Univ. of NC	Greensboro
Collins, John P., S ²³	8-1271—VA Hospital	Durham
Combs, Fielding, OALR ²⁵	9858—522 Nissen Bldg.	Winston-Salem
*Combs, Joseph John, I & T ⁷⁵	6252—127 W. Hargett St.	Raleigh
Compton, John W., R ⁷⁷	614—Box 1141	Goldsboro
Connar, Richard Grigsby, S ²³	4308 Woodmere Rd., Tampa 9	Fla.
Connor, Charles David, GP ¹⁹	22 Rose Court	Havelock
*Conrad, Elizabeth, Pd ²⁵	7424—210 Reynolds Bldg.	Winston-Salem
Cook, Henry Lilly, Jr., (Hon.) OALR ³²	7434—C-2 Irving Park Manor	Greensboro
Cook, John S., Jr., Hosp. Res. ⁷⁷	Bluefield Sanatorium	Bluefield, W. Va.
Cook, Joseph Lindsay, Ins ³²	3-5591—Drawer P., Pilot Life Ins. Co.	Greensboro
*Cook, Paul H., GP ⁵⁰	FR 56144—2400 Wilkinson Blvd.	Charlotte
*Cook, William Eugene, I & T ²⁰	Veterans Hosp.	Fayetteville
*Cooke, Grady Carlyle, (Hon.) Ret., D ²⁵	6-3957—RFD #1	Morehead City
Cooke, Hershell Marcus, GP ³	Hagaman Clinic	Boone
*Cooke, Quinton Edwin, GP ³⁷	2931	Murfreesboro
Cooke, Ralph M., GP ⁷¹	204—P.O. Box 497	Elkin
Cooley, Samuel Studdiford, I ⁸	4011—P.O. Box 745	Black Mountain
Coonrad, Raphael Woodward, Or ²³	Broad & Englewood Sts.	Durham
*Cooper, Albert Derwin, T & I ²³	6-716—300 E. Main St.	Durham
*Cooper, George M., Jr., ALR ⁷⁵	9917—2111 Clark Ave.	Raleigh
Coppedge, Thomas Oliver, Jr., R ⁵⁰	FR 5-0468—1012 Kings Drive	Charlotte
*Coppridge, Wm. Maurice, (Hon.) U ²³	8-1297—1200 Broad St.	Durham
Corbett, Clarence Lee, GP ³⁴	3434—Broad Street	Dunn
Corbett, James Patrick, GP ⁵⁶	466—Box 8	Swansboro
Corcoran, Edwin Emmons, I & GE ⁸	2-6641—408 Medical Bldg.	Asheville
Corey, James Hicks, Jr., GP ⁷²	USAF Infirmary 494 Med. Group	
	APD 125	New York
*Corkey, Elizabeth Moon Conard, PH ⁷⁷	Mecklenburg County Health Dept.	Charlotte
Cornell, William Sessions, S ⁵⁰		Charlotte
*Cornwell, Abner Milton, S ¹⁵	Regent 5-7422—S. Aspin St.	Lincolnton
Corpening, Oscar, Jr., (Hon.) GP ¹¹	4561	Granite Falls
*Corpening, William Nye, GP ¹¹	4561—6 N. Main St., Box 167	Granite Falls
Correll, Earl Eugene, GP ¹⁰	8696—210 Cabarrus Bank Bldg.	Kannapolis
Cosgrove, Kenneth Edward, I ³⁶	2-1691—501 Sixth Street	Hendersonville
Costner, Walter Vance, Pd ¹⁵	Regent 5-7104—P.O. Box 408	Lincolnton
Couch, Vanderbilt Franklin, (Hon.) Ret., OALR ²⁵	O'Hanlon Bldg.	Winston-Salem
Coughlin, Joyce Desmond, U ⁸	2-3281—409 Flatiron Bldg.	Asheville
*Coulter, J. C., T ²⁵	7139—Forsyth Co. Sanatorium	Winston-Salem
*Covington, Furman Payne, GP ²¹	2828—2 Salem St.	
	State Commercial Bank	Thomasville
Covington, James Madison, Jr., GP ²	606—32 E. Morgan St.	Wadesboro
Covington, John Malloy Clayton, OALR ³³	7-2045—201 Jackson St.	Roanoke Rapids
Covington, M. Cade, GP ⁴³	2-2481—112 E. Main St. Jonesboro	
	Heights	Sanford
Cox, Alexander McNeil, GP ⁶⁵		Madison
Cox, Howard Louis, GP ³⁰	3217—Box 1166	Oxford
Cox, William Foscue, I ²⁵	3-7181—1007 Reynolds Bldg.	Winston-Salem
Cox, Samuel Clements, GP ⁵⁶	3852—237 New River Dr.	Jacksonville
*Cozart, Benjamin Franklin, GP ⁶⁵	9317—1116 S. Main St.	Reidsville
Cozart, Samuel Rogers, GP ³²	2-4322—122 S. Green St.	Greensboro
*Cozart, Wiley Holt, GP ⁷⁵	21—112 Raleigh St.	Fuquay Springs
Craig, Robert Lawrence, PN ⁸	3-2761—Highland Hospital	Asheville
Craig, Sylvester Douglas, (Hon.) I ²⁵	4-8012—8 West Third Street	Winston-Salem
Craig, William Kenneth, GP ³³	2921	Enfield
*Craige, Ernest, C & I ²³	9031—N. C. Memorial Hospital	Chapel Hill
Crane, George Levering, I ²³	7-3275—1105½ W. Chapel Hill St.	Durham
*Crane, George W., Jr., D ²³	8-0081—1200 Broad St.	Durham
Cranz, Oscar William, S ⁴⁴	2122—Kinston Clinic	Kinston
*Craven, Frederick Thorns, GP ¹⁰	4205—7 N. Union St.	Concord
*Craven, Jean Davidson, Pd ²¹	3545 19 W. Third Ave.	Lexington
Crawford, Porter F., D ¹	2320—272 N. Graham, Hopedale Rd.	Burlington
Crawford, William Jennings, (Hon.) U ⁷⁷	302—Bank of Wayne Bldg.	Goldsboro
Crawley, Sam J., Jr., GP ¹⁷	2281—Gardner-Webb Health Center	
		Boiling Springs
*Creadick, Robert N., ObG ²³	9011—Duke Hosp.	Durham
Credle, Carroll Spencer, GP ³⁷	2830—P.O. Box 2118	Ahoskie
Cree, Maurie Bertram, S ³⁶	3176—Prof. Bldg. Arcade	Hendersonville
Creech, Lemuel Underwood, GP ³²	5675—138 Church St.	High Point

*Present at 1955 meeting

Creed, George Otis, GP ⁶⁹	399—208 St. Bk. Bldg.	Laurinburg
*Crescenzo, Victor M., I ⁶⁵	5536—315 S. Main St.	Reidsville
†Crisp, Sellers Mark, GP ⁶⁰	2269—500 Dickerson Ave.	Greenville
*Crissman, Clinton S., GP ¹	7496—114½ N. Main St.	Graham
Cromartie, Robert Samuel, (Hon.) PH ⁷	Health Dept.	Elizabethtown
Cromartie, William James, I ²³	8-3901—UNC Med. Sch.	Chapel Hill
Croom, Gabe Holmes, (Hon.) P ⁸	3-0295—Wesnoca San., 30 Lookout Rd.	Asheville
*Croom, Robert DeVane, Jr., GP ⁶⁴	22—Carpenter Bldg.	Maxton
Crosby, Lewis Pearce, GP ⁶⁵	9365—200 S. Main St.	Reidsville
*Cross, Almon Rufus, ObG ³²	5404—649 N. Main St.	High Point
*Cross, Robert V., Ob ³²		High Point
Crouch, Auley McRae, Sr., (Hon.) Ret., Pd ⁵⁴	2-3619—520 Dock St.	Wilmington
Crouch, Auley McRae, Jr., Pd ⁵⁴	3-5147—1002 Grace Street	Wilmington
Crouch, Thomas Dalton, (Hon.) GP ³⁹	6512	Stony Point
*Crouch, Walter Lee, Pd ⁵⁴	3-5147—10th & Grace St.	Wilmington
*Crow, Samuel Leslie, I & C ⁸	5633—709 Flatiron Bldg.	Asheville
Crowe, John Buren, GP ¹⁷	Shelby 6717—Box 25	Earl
*Crowell, James Allen, ObG ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte
*Crowell, Lester Avant, Jr., R & I ⁴⁵	Regent 5-7424—Gordon Crowell Mem. Hosp.	Lincolnton
Crump, Cecil LaVon, OALR ⁸	7051—30 Wall St.	Asheville
*Crump, George Curtis, I ⁸	3-7631—806 Public Service Bldg.	Asheville
*Crumpler, Amos Gilmore, GP ⁷⁵	108—Spring Ave.	Fuquay Springs
Crumpler, James Fulton, Pd ²⁴	2-1523—414 Peachtree St.	Rocky Mount
*Crumpler, Paul, (Hon.) GP ⁶⁸	2636—401 Lafayette St.	Clinton
*Crumpler, Warren Harding, GP ⁷⁷	2521—Center St.	Mt. Olive
Crutchfield, Andrew Jackson, I & C ²⁵	5-5669—610 W. 5th St.	Winston-Salem
*Cubberley, Charles Lamb, Jr., GP ⁷⁹	2652—Gold Prof. Bldg.	Wilson
*Culbreth, George Gordon, NS ⁵⁰	ED 3-9363—207 Hawthorne Lane	Charlotte
*Cummings, Michael Penn, (Hon.) GP ⁶⁵	4228—224½ S. Scales St.	Reidsville
*Curran, Edward C., Jr., Pd ²³	9031—N. C. Memorial Hospital	Chapel Hill
*Currie, Daniel Smith, Sr., (Hon.) GP ^{20 and 61}	48—Box 108	Parkton
*Currie, Daniel Smith, Jr., OALR ²⁹	3-0365—302 Old St.	Fayetteville
*Curry, Clayton S., ObG ⁵⁰	FR 65698—1309 Plaza	Charlotte
Curtis, Dock, GP ³²	2-5661 Ext. 220—Infirmary WC UNC	Greensboro
*Curtis, Thomas E., P ²³	9031—Dept. of Psychiatry UNC Sch. Med.	Chapel Hill
*Cutchin, Joseph Henry, (Hon.) GP ²⁴	257-1—Box 185	Whitakers
Cutchin, Joseph Henry, Jr., GP ¹³	Catawba 2388	Sherril's Ford
Cutri, Joseph John, ³		Jefferson
Dale, F. Payne, S ⁴⁴	2122—Kinston Clinic	Kinston
Dale, Grover Cleveland, GP ⁷⁷	180—Wayne Bank Bldg.	Goldsboro
*Dalton, Bennie Booker, GP ⁶²	3152—149 McArthur St.	Asheboro
Dalton, Horace Milton, Oph ⁴⁴	3974—400 Glenwood Ave.	Kinston
Dalton, William B., S ³²	3-1568—120 S. Greene St.	Greensboro
Dameron, Joseph T., S ⁶⁶	5822—102 W. Innes St.	Salisbury
*Dameron, Thomas B., Jr., Or ⁷⁵	8331—309 Hillsboro St.	Raleigh
Daniel, Louie Samuel, GP ³⁰	3020—P.O. Box 116, Main St.	Oxford
Daniel, Roy David, Pd ⁴⁰	213—Ferguson Bldg.	Sylva
Daniel, Thomas Manning, Pd ⁴¹	2745—332 S. 3rd St.	Smithfield
Daniel, Tom B., U ⁷⁵	4-4391—700 W. Morgan St.	Raleigh
*Daniel, Walter Eugene, U ⁵⁰	ED 4-0492—1012 Kings Dr.	Charlotte 7
*Daniels, Oscar Carroll, Sr., (Hon.) Ret. OALR ⁵⁷	182	Oriental
Darden, James Lee, Jr., GP ⁶	2541	Colerain
*Daughtridge, Arthur Lee, (Hon.) R ²⁴	2-5121—144 Coast Line St.	Rocky Mount
Davant, Charles, GP ³	2121—Blowing Rock Hosp.	Blowing Rock
Davenport, Carlton Alderman, GP ¹⁶	2411—22 Market St.	Hertford
Davenport, Clifton, GP ⁶⁰	4011—121 W. Power St.	Ayden
Davidian, Vartan Amber, S ⁴¹	2105—727 Hancock St.	Smithfield
*Davidson, Alan, OALR ¹⁹	4183—P.O. Box 1313	New Bern
*Davidson, James Hubert, I ²³	4-0941—604 W. Chapel Hill St.	Durham
*Davis, Courtland Harwell, Jr., NS ²⁵	4-6361—Bowman Gray	Winston-Salem
Davis, David A., Anes ²³	9031—N. C. Memorial Hospital	Chapel Hill
Davis, Grayson, GP ²⁰	2-9119—Box 567	Hope Mills
Davis, Jack B., GP ³⁵	GL 6-3350—Masonic Bldg.	Waynesville
*Davis, James Evans, S ²³	8-8331—1200 Broad St.	Durham
Davis, James Matheson, (Hon.) GP ²	101—211 W. Wade St.	Wadesboro
†Davis, James Wagner, (Hon.) S ³⁹	Davis Hosp.	Statesville
Davis, John Preston, I ²⁵	2-4294—310 W. Fourth St.	Winston-Salem
Davis, John Woodrow, GP ¹³	3818—21 Second Ave., N. E.	Hickory
Davis, Joseph Franklin, (Hon.) GP ³²	2-5502—1216 14th St.	Greensboro
Davis, Junius W., Jr., Pd ¹⁹	6260—315 Craven Street	New Bern
Davis, Philip Bibb, S ³²	5873—442 N. Wrenn St.	High Point
*Davis, Rachel Darden, G ⁴⁴	4342—111 E. Gordon St.	Kinston
*Davis, Richard Boyd, (Hon.) S ³²	2-4510—122 S. Green St.	Greensboro

*Present at 1953 meeting

†Deceased

Davis, Rufus Jackson, GP ²⁷	Lowell 4-1321—Box 317	Cramerton
*Davis, Wayne Edward, U ²⁵	2-0276—626 Reynolds Bldg.	Winston-Salem
Davis, William H., Jr., Pd ²⁵	3-1686—720 W. Fifth Street	Winston-Salem 3
*Davison, Wilburt Cornell, PD & Ed ²³	9011—3701 Duke Hosp.	Durham
Dawson, James Nelson, GP ⁴¹	2891—Box 626	La Grange
*Deaton, Paul McNeely, GP ³⁹	7253—766 Hartness Road	Statesville
Deaton, W. Ralph, Jr., S ³²	4-0252—153 Bishop St.	Greensboro
*DeCamp, Allen Ledyard, ObG ⁵⁰	FR 5-8628—1505 Elizabeth Ave.	Charlotte
Deeds, Charles Ross, Pr ³⁶	7335—5th Ave. at Oak St.	Hendersonville
Dees, Daniel Alphonzo, (Hon.) OALR ⁵⁷	259-1	Bayboro
Dees, John Essary, U ²³	9011—Duke Hosp.	Durham
Dees, John Tyler, GP ⁵¹	242	Burgaw
†Dees, Ralph Erastus, (Hon.) S ³²	2-3040—P.O. Box 1863	Greensboro
*Dees, Susan Coons, Pd & A ²³	9011—Box 3021, Duke Hosp.	Durham
Dennis, Robert Glenn, GP ³	2121	Blowing Rock
Denton, Aulsey Lee, (Hon.) GP ²¹	Nashville 2126—Box 486	Castalia
Dewar, William Banks, (Hon.) I ⁷⁵	8147—619 Prof. Bldg.	Raleigh
*Deweese, Philip E., GP ¹⁰	325—Box 217, Ferguson Bldg.	Sylva
Dick, Frederick William, I ³⁹	7792—760 Hartness Road	Statesville
Dick, Macdonald, I ²³	9011—Box 3813 Duke Hosp.	Durham
Dickerson, Andrew Jackson, 35	Masonic Temple Bldg.	Waynesville
Dickie, James W., GP ⁵¹	2-2424—509 Princess St.	Wilmington
Dickinson, Kenneth D., ObG ⁷⁵	3-8021—500 St. Mary's St.	Raleigh
Dickson, Brice Templeton, Jr., I ²⁷	6196—Box 335, Med. Bldg.	Gastonia
*Dickson, Malcolm Shields, GP ¹	6-2152—132 Lexington Ave.	Burlington
Diggs, Andrew Monroe, 50		Huntersville
Dillard, S. B., GP ⁶⁵	Dept. of Dermatology, Univ. of Va.	Charlottesville, Va.
Disoway, Lulu M., ObG ¹⁹	Good Shepherd Hospital	New Bern
Ditmore, Harry Boaz, GP ⁴⁷	2551—Box T	Marshall
*Dixon, George Grady, (Hon.) GP ⁶⁰	2891—215 E. Second St.	Ayden
Dixon, Philip L., Jr., GP ⁵⁶	3016—Mill Ave. & Coll. St.	Jacksonville
Dobias, Stephen G., GP ⁴⁹	211—Box 138	Old Fort
Dodd, Patricia, S & G ⁸	8911—23 Flint St.	Asheville
*Doffermeyer, Luther Randolph, GP ³⁴	2137—119 Lucknow Square	Dunn
Donlan, Joseph E., PH ¹	Grace Hospital	Banner Elk
*Donnelly, James Ford, ObG ²⁵	State Board of Health	Raleigh
Donner, Paul G., PN ⁵⁰	FR 7-4570—306 Med. Arts. Bldg.	Charlotte 2
Donovan, Daniel Lafayette, I ²³	9031—UNC Sch. of Medicine	Chapel Hill
*Dorenbusch, Alfred A., ALR ⁵⁰	ED 3-1131—106 W. 7th St.	Charlotte
Dorsett, Fletcher L., GP ²⁵	2020 Hollywood St.	Winston-Salem
*Doshier, Wm. Sterling, ObG ⁵¹	3-1611—306 N. 11th St.	Wilmington
*Dotterer, Elizabeth James, G ⁴³	4-6731—118 Hawkins Ave.	Sanford
*Dotterer, John Emanuel, GP ⁴³	4-6731—118 Hawkins Ave.	Sanford
Douglas, John Munroe, C & I ⁵⁰	ED 3-0125—1012 Kings Drive	Charlotte
Dougherty, Raymond Joseph, GP ⁵³	2061—Box 436	Vass
Downs, Kenneth R., GP ⁵⁰	ED 2-4412—3213 N. Caldwell Street	Charlotte
Doyle, Owen William, 32	363 N. Elm St.	Greensboro
Draper, Arthur J., I ⁵³	Kaiser Hosp.	San Francisco, Calif.
Drummond, Charles Max, GP ⁴⁹	2194—9½ W. Henderson St.	Marion
Duck, Walter Otis, GP ⁴⁷	2581—P.O. Box 387	Mars Hill
Duckett, Virgil Howard, GP ³⁵	2642—Canton Med. Bldg.	Canton
Duff, Charles, Pd & I ¹⁹	2077—607 Pollock St.	New Bern
†Duffy, Richard Nixon, S ¹⁹	517 Craven St.	New Bern
*Dugger, Gordon Shelton, NS ²³	9031—N. C. Memorial Hosp.	Chapel Hill
Dula, Frederick Mast, S ¹¹	4-5321—Dula Hosp.	Lenoir
*Duncan, Stacey Allen, (Hon.) GP ⁴¹	233-1—Box 336	Benson
Dunlap, Lucius Victor, (Hon.) GP ⁷⁰	128 W. Main St.	Albemarle
Dunn, Richard Berry, ObG ³²	2-3103—1014 N. Elm St.	Greensboro
Dunnagan, William A., GP ¹¹	Box 35	Clayton
*Dunning, Everette Jackson, S ⁵⁰	FR 5-0958—1012 Kings Drive	Charlotte
Dunning, Preston M., Ind ⁴⁴	7-0111—Du Pont Plant.	Kinston
*Durham, Carey Winston, GP ³²	8236—330 Southeastern Bldg.	Greensboro
Durr, Walter J., S ⁴⁰	327—Box 855	Sylva
Dyer, John Wesley, GP ³²	9712—Rt. 1	High Point
Eagle, James Carr, (Hon.) GP ⁶⁶	146—117 Fifth St.	Spencer
Eagle, Watt Weems, ALR ²³	9011—Duke Hosp.	Durham
Eagles, Archie Y., I ³⁷	2286—407 Colony Ave.	Ahoskie
Eagles, Charles Sidney, (Hon.) GP ⁷⁹	2156—Box 35	Saratoga
Faker, Ralph G., U ¹⁷	2-1221—610 Lincoln Ave.	Shelby
*Farle, Jesse Burns, GP ¹⁴	60—128 S. Chatham Ave.	Siler City
Earp, Raymond Elmore, (Ret.), S ⁴¹	2103—Brookhill Farms	Selma
*Easley, Eleanor Beamer, ObG ²³	6-2291—604 W. Chapel Hill St.	Durham
*Eason, Herman Franklin, T ⁷⁹	7-1121—Eastern N. C. Sanatorium	Wilson
*Eastwood, Frederick Thomas, Pd ⁷⁵	2-3760—2027 Clarke Ave.	Raleigh

†Deceased

*Present at 1955 meeting

Eaves, Rupert Spencer, GP ⁶⁷	4233—205 Main St.	Rutherfordton
Eckbert, William Fox, GP ²⁷	Lowell 4-1321—137 8th Ave.	Cramerton
*Eckerson, Charles Neil, GP ⁵²	3271—Box 725	Troy
Eddins, George Edgar, Jr., I ⁷⁰	1480—214 E. N. St.	Albemarle
Edgerton, Glenn Souders, ObG ⁵⁰	FR 6-6533—1012 Kings Drive	Charlotte
*Edmondson, Frank, Jr., GP ⁶²	2127—317 Sunset Ave.	Asheboro
*Edwards, Bertie Oscar, (Hon.) I ⁸	2-1351—310 Flatiron Bldg.	Asheville
Edwards, Forest D., (Hon.) Ob ⁴⁵	9561—Route 3	Lawndale
Edwards, Vertie Edward, (Hon.) GP ³²	3746	Stokesdale
Egerton, Courtney, ObG ⁷⁵	4-7386—714 St. Mary's St.	Raleigh
Eldridge, Charles Patterson, (Ret.) I ⁷⁵	5382—1621 St. Mary's St.	Raleigh
*Eldridge, Harvey Allen, OALR ³⁴	3421—111 N. Wilson St.	Dunn
Elesha, William, S ⁸	4-5454—857 W. Fifth St.	Winston-Salem
Elfmom, Samuel Leon, I ²⁰	2-3079—225 Green St.	Fayetteville
Eller, Luke Branson, GP ⁶²	22	Liberty
*Ellington, Amzi Jefferson, (Hon.) OALR ¹	6-1922—Ellington Bldg., Box 108	Burlington
*Ellinwood, Everett Hews, PH ³²	3-9426—300 E. Northwood St.	Greensboro
*Elliot, Avon Hall, (Hon.) PH ⁷⁵	State Bd. of Health	Raleigh
Elliott, John Palmer, GP ⁶⁵	ME 5-3781—115 E. Ridge Ave.	Draper
*Elliott, Joseph Alexander, (Hon.) D ⁵⁰	ED 4-4709—1012 Kings Drive	Charlotte 7
Elliott, Joseph Alexander, Jr., D ⁵⁰	ED 4-4709—1012 Kings Drive	Charlotte 7
Elliott, Julian Carr, GP ³⁰	3538—Box 315	Oxford
Elliott, Wm. McBrayer, GP ⁶⁷	3227—107 Powell St.	Forest City
Engel, Frank Libman, Ed. I & Phy ²³	9011—Duke Hosp.	Durham
*Erb, Norris Scribner, U ⁶⁶	1913—909 W. Henderson St.	Salisbury
Erbele, Leo Albert, Hosp. Res. ⁴⁹	4-6361—Dept. of Path., Bowman Gray	Winston-Salem
Erdman, Lawrence Huntington, S ¹⁹	5457—206 S. Front St.	New Bern
Ernst, Henry Edwin, GP ¹⁰	3252—57 N. Church St.	Concord
Ervin, John Witherspoon, GP ⁹	88—Ervin Bldg.	Morganton
*Erwin, Evan A., Jr., R ⁶⁹	1055—Box 866	Laurinburg
Espey, Dan, Jr., T ⁸	2251—Western N. C. Sanatorium	Black Mountain
Estes, Edward Harvey, Jr., C ²³	9011—Duke Hospital	Durham
*Estes, Marion M., P ⁷⁵	7581—State Hospital	Raleigh
Etherington, John L., OALR ⁷⁷	2040—Wayne Bank Bldg.	Goldsboro
*Evans, John E., S ⁵⁴	3-1691—304 N. 11th St.	Wilmington
Evans, Otis Druell J., Ind ¹³	2-5366—247 Charlotte St.	Asheville
Ewers, Edwin Patterson, GP ²²	432—105 E. Hill St.	Warsaw
Ewing, John A., P ²³	9031—N. C. Memorial Hosp.	Chapel Hill
*Faison, Elias Samson, I ⁵⁰	FR 6-4852—1012 Kings Drive	Charlotte
Faison, Yates Wellington, (Hon.) Pd ⁵⁰	1018 Queens Rd.	Charlotte
*Fales, Robert Martin, S ⁵⁴	2-8490—913 Murchison Bldg.	Wilmington
Falls, Fred, GP ¹⁷		Shelby
*Farley, William W., Pd ⁷⁵	3-5711—903 W. Peace St.	Raleigh
*Farmer, Thomas W., N ²³	9031—N. C. Mem. Hosp.	Chapel Hill
*Farmer, Wm. Anderson, S ²⁰	3-0136—107 Bradford Ave.	Fayetteville
*Farmer, William Dempsey, OALR ³²	2-4724—119 N. Elm St.	Greensboro
Farmer, Woodard Eason, I ⁸	7739—Biltmore Plaza	Asheville
*Farrington, Reno Kirby, S ²¹	595—16½ W. Main St.	Thomasville
*Farthing, John Watts, S ⁵⁴	6625—303 N. Tenth St.	Wilmington
Fassett, Burton Watson, (HON) OALR ²³	3-9861—123 W. Main St., (Box 1130)	Durham
Faulk, James Grady, S ⁷³	AT 3-6314—Box 496	Monroe
Fearing, Isaiah, (Hon.) GP ⁵⁸	2484—203 W. Main St.	Elizabeth City
Fearrington, James Cornelius Pass, I ³⁵	2-9810—642 Holly Ave.	Winston-Salem
Feezor, Charles Noel, GP ⁶⁶	154—712 Wallace Bldg.	Salisbury
Feldman, Leon Henry, I ⁸	7218—20 Battery Park Ave.	Asheville
*Felton, Robert Lee, Jr., GP ⁵³	3812—Box 176	Carthage
Felts, John H., Jr., GP ²⁵	Bowman Gray School of Medicine	Winston-Salem
Fender, James Earle, GP ³⁵	Glendale 6-3131—Masonic Temple Bldg.	Waynesville
*Fenner, Edwin Ferebee, (Hon.) GP ⁷⁴		Henderson
Ferguson, George Burton, ALR ²³	2-2136—1110 W. Main St.	Durham
Ferguson, Robert Thrift, (Hon.) Ret., GP ⁵⁰	2-3452—237 Middleton Dr.	Charlotte
*Ferrell, John A., Hosp. Adm. ⁷⁵	4-3611—Box 1880, N. C. Med. Care Comm.	Raleigh
Fesperman, Joseph Claude, GP ²⁷	3-2241—Box 517	Stanley
Fetner, Lawrence Merrill, R ¹¹	Blackwelder Hosp.	Lenoir
Fetter, Bernard F., Path ²³	9011—Duke Hospital	Durham
Feuer, Abe Lawrence, GP ²⁷	4-1041—212 W. Second Ave.	Gastonia
*Fewell, Richard Alexander, I ¹	7263—318 S. Main St.	Burlington
Field, Bob Lewis, GP ⁶⁶	317—Prof. Bldg.	Salisbury
Fields, James Armstead, PH ³⁷	Winton 191—P.O. Box 366	Ahoskie
*Fields, Leonard Earl, GP ²³	3501—P.O. Box 788, Franklin St.	Chapel Hill
Fike, Ralph Llewellyn, GP ⁷⁹	7-1182—Wilson Clinic	Wilson
Finch, Ollie Edwin, (Hon.) I & GE ⁷⁵	2-1929—133 Fayetteville St.	Raleigh
Fincher, Robert Charles, Jr., PN ³²	8-551—107 Spencer Ave.	High Point

*Present at 1955 meeting

Finck, Pierre Antoine, Path ⁷⁷	3600—809 E. Ash St.	Goldsboro
Fink, Emma Sloop, GP ¹	RE 3-4318—Garrett Mem. Hosp.	Crossnore
Fischer, Janet Jordan Hopkins, I ²³	8-3901—N. C. Memorial Hosp.	Chapel Hill
Fischer, Newton D., ALR ²³	9031—UNC Med. School	Chapel Hill
Fisher, Ernest Woodrow, GP ⁴⁶	252—P.O. Box 290	Franklin
*Fisher, George Walton, Jr., GP ⁷	McPherson Hospital	Durham
Fisher, Marshall L., P ⁵⁰	ED 3-5441—1618 Elizabeth Ave.	Charlotte
*Fitzgerald, Charles Edmund, GP ⁶⁰	3673—125 N. Main St.	Farmville
Fitzgerald, John Dean, S ⁵⁹	2351—409 Roxboro Bldg.	Roxboro
Fitzgerald, John Herbert, (Hon.) OALR ¹¹	3323—Upchurch Bldg.	Smithfield
*Fitzgerald, John Hill, Jr., Pd ⁴⁵	5-7421—Crowell Hosp.	Lincolnton
Fitzgerald, Robert Greeson, GP ⁵⁹	6962—Prillaman Bldg.	Roxboro
*Fitzpatrick, Hugh, GP ⁶²	2135—213 S. Fayetteville St.	Asheboro
Flagge, Philip Wesley, (Hon.) Ret., I ³²		Laramie, Wyoming
Fleetwood, Joseph Anderton, (Hon.) GP ⁵⁵	2641—Box 408	Conway
Fleetwood, Joseph Anderton, Jr., GP ⁵³	USS Glacier AGB-4, C/o FPO.	New York, N. Y.
Fleming, Frank Reavis, OALR ⁷¹	338—Hugh Chatham Mem. Hosp.	Elkin
*Fleming, Laurence Edwin, S ⁵⁰	ED 3-2823—1531 Elizabeth Ave.	Charlotte
*Fleming, Major Ivy, (Hon.) R ²⁴	2-1609—404 Falls Rd.	Rocky Mount
Fleming, Ralph Gibson, I ²³	8-0101—1200 Broad St.	Durham
*Fleming, Samuel Wallace, GP ⁷⁹	5461	Elm City
*Fleming, William LeRoy, I ²³	9031—UNC Sch. of Med.	Chapel Hill
Flippin, James Meigs, (Hon.) GP ⁷¹		Pilot Mountain
Flowers, Charles Ely, Sr., (Hon.) Hosp Dir ¹⁵	2-3747—Box 8	Raleigh
*Flowers, Charles E., Jr., ObG ²³	9031—N. C. Memorial Hosp.	Chapel Hill
*Floyd, Anderson Gayle, GP ¹⁸	3317—605 S. Madison St.	Whiteville
Floyd, Hal Stanfield, GP ⁶¹	5311—183 S. Main St.	Fairmont
Floyd, Lawrence Dowse, (Hon.) GP ¹⁸	9102	Fair Bluff
*Floyd, William Russell, S ¹⁰	4251—1016 N. Church St.	Concord
Flythe, William Henry, I ³²	5929—641 N. Main St.	High Point
*Foard, Fred T., Jr., PH ⁷⁵	4-3611—State Board of Health	Raleigh
*Follo, Paige B., Pd ³²	4-0106—1209 Magnolia	Greensboro
Folsom, Theodore Winslow, GP ⁸		Swannanoa
Forbes, Gus E., I ⁶⁹	Ph. 1055—Scotland County Hosp.	Laurinburg
*Forbes, Thomas Earl, GP ⁶⁵	7114—307 W. Morehead St.	Reidsville
Forbus, Wiley Davis, Path ²³	9011—Box 3712 Duke Hosp.	Durham
Ford, Blanchard Fred, GP ⁶⁹	Box 97	Maxton
Ford, Elizabeth L., Pd ³²	4-8087—1209 Hill St.	Greensboro
Forsyth, H. Francis, Or ²⁵	4-6361—Bowman Gray Sch. of Med.	Winston-Salem
Fortescue, William Nicholas, GP ³⁶	4094—Box 16	Hendersonville
Fortin, John Noel, P ²³	9428—Box 997, Univ. of N. C.	Chapel Hill
Fortney, Austin P., GP ³²	6986—Box 66	Jamestown
Fortune, Alexander Fletcher, (Hon.) GP ³²	8704—122 S. Green St.	Greensboro
Fortune, Benjamin Fletcher, GP ³²	4-8739—122½ L. Greene St.	Greensboro
Foster, Clarence B., Oph ⁵⁰	ED 4-4585—219 Travis Ave.	Charlotte
Foster, Houston G., T ⁷⁹	7-1121—203 N. Pine St.	Wilson
Foster, Howitt Hodge, (Hon.) GP ⁷⁶	2496—Box 205	Norlina
*Foster, John Franklin, (Hon.) GP ¹³	3-6091—153 Steele St.	Sanford
*Foster, John W., I ²⁵	Veterans Adm.	Winston-Salem
*Foster, Malcolm Tennyson, PH & T ²⁰	3-3342—Box 470	Fayetteville
Foushee, John C., S ⁶	410 Granville St.	Windsor
Foushee, J. Henry Smith, Path & CP ²⁵	Baptist Hospital	Winston-Salem
*Fowle, Willis Happer, III, GP ⁶²	6372—514 S. Fayetteville St.	Asheboro
Fowler, Henry Jackson, GP ²⁵	4181—Box 403	Walnut Cove
Fowler, John A., P ²³	8-0971—2212 Erwin Road	Durham
Fowlkes, William Mortimer, Jr., GP ⁷⁵	6111—P.O. Box 307	Wendell
Fox, Dennis Bryan, S ⁷⁰	539—330 N. First St.	Albemarle
Fox, Francis Hill, I ²³	Box 1769	Durham
Fox, Herbert Junius, (Ret.) I ²³	P.O. Box 1769	Durham
Fox, Norman Albright, I ³²	3-9221—433 Jefferson Bldg.	Greensboro
*Fox, Powell Graham, U ⁷⁵	2-3087—302 Lands Bldg.	Raleigh
*Fox, Robert Eugene, PH ⁷⁰	727—Box 707	Albemarle
*Frank, Joe L., R ³⁷	3171—Roanoke-Chowan Hosp.	Ahokie
Franklin, Ernest Washington, ObG ⁵⁰	FR 5-1457—1324 Scott Ave.	Charlotte
Franklin, Robert Benjamin Clinton, PH ⁷¹	241—227 Rockford St.	Mt. Airy
Franz, Bruce Johnston, S & T ⁸	3-4410—610 City Hall Bldg.	Asheville
Frazier, Claude A., Pd & A ⁸	4-1650—516 City Hall Bldg.	Asheville
Frazier, John Wesley, Jr., U ⁶⁶	1913—909 W. Henderson St.	Salisbury
Freedman, Arthur, I & C ³²	2-4136—1000 N. Elm St.	Greensboro
Freeman, Alton Brooks, GP ⁶²	2627—Box 516	Randleman
*Freeman, Jere David, (Hon.) OALR ⁵¹	2-3528—201 N. Front St.	Wilmington
Freeman, Percy Lee, U ²⁷	6151—406 N. Highland St.	Gastonia
Freeman, Roy O., GP ³	Ashe Mem. Hosp.	Jefferson
*Freeman, William H., S ⁷⁰	539—330 N. First St.	Albemarle
Freeman, William Talmage, Pd ⁸	8527—McGeachy Bldg., Biltmore Station	Asheville
Frierson, John Hugh, Jr., R ²¹	2-6181—Park View Hosp.	Rocky Mount
Fritz, Jacob Luther, GP ⁶²	2127—317 Sunset Ave.	Asheboro

Fritz, Olin Grady, GP ²⁵	2421—Box 109	Walkertown
Fritz, William Abel, GP ¹³	2-7716—124 N. Center St.	Hickory
Frizzelle, Mark Twain, (Hon.) GP ⁶⁰	2871—122 N. E. Railroad St.	Ayden
Frohbose, William J., U ²⁴	2-6181—Park View Hosp.	Rocky Mount
Frye, Glenn Raymer, (Hon.) S ¹³	2-6131—420 N. Center St.	Hickory
Fulcher, Luther, GP ¹²	Box 308	Beaufort
Fuller, Henry Fleming, ObG ⁴⁴	2820—Kinston Clinic	Kinston
Fulp, Jas. Francis, GP ⁶⁵	3221	Stoneville
*Furgurson, Ernest Whitmal, GP ⁴⁸	3951—Plymouth Clinic	Plymouth
Futch, William Alexander, GP ¹⁸	438-1—Box 454	Chadbourn
Futrell, John Marion, GP ³²	28-2202	Summersfield
Futrell, Lokie Melton, (Hon.) GP ³⁷	2391—Box 5185	Murfreesboro
Gaddy, George D., OALR ¹	6-2180—205 Bailey-Coble Bldg.	Burlington
Gage, Lucius G., Jr., I ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte 2
Gage, Lucius Gaston, (Hon.) I & A ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte 2
Gallant, Robert Miller, (Hon.) GP ⁵⁰	ED 4-1214—824½ E. Trade St.	Charlotte
Galloway, James Bruce, Jr., Or ⁸	2-6442—247 Charlotte St.	Asheville
Galloway, James H., GP ⁷⁵	4-2103—222 Bryan Bldg.	Raleigh
Galloway, Louise J., Anes ⁸	67-72531—Box 89	Enka
*Gallup, Charles H., Anes ⁷⁵	4-4044—Box 10404, 2317 McMullan Circle	Raleigh
Gamble, John R., Jr., GP ⁴⁵	Regent 5-5341—East Main St.	Lincolnton
Gambrell, Grover Cleveland, (Hon.) PH ²¹	Box 522	Lexington
*Garber, Edgar Clyde, Jr., ObG ²⁰	2-8500—1256 Ft. Bragg Rd.	Fayetteville
*Gardner, Clarence Ellsworth, Jr., S ²³	9011—Duke Hosp.	Durham
*Garrard, Robert Lemley, PN ³²	4-1411—800 N. Elm St.	Greensboro
Garren, Robert Hall, (Hon.) OALR ⁷³	3-3661—Secrest Bldg.	Monroe
Garrenton, Connell George, GP ⁶⁰	2301—Bethel Clinic	Bethel
*Garrett, Frank Bernard, (Hon.) OALR ⁶³		Rockingham
*Garrett, John B., GP ²⁵	2751	Walkertown
Garrett, Norman H., Jr., I ³²	4-6738—153 Bishop St.	Greensboro
Garris, Frank Henry, (Hon.) GP ⁶	2221—Box 136	Lewiston
*Garrison, Ralph Bernard, GP ⁶³	123—220 N. Main St.	Hamlet
*Garrison, Robert Lee, S ⁵⁰	7-1349—1508 E. 4th St.	Charlotte
*Garvey, Fred Kesler, U ²⁵	2-2943—Bowman Gray Sch. of Med.	Winston-Salem
Garvin, O. David, PH ²³	7641—Health Dept.	Chapel Hill
*Gaskin, John Stover, GP ⁷⁰	383—P.O. Box 28—165 N. 2nd St.	Albemarle
*Gaskin, Madge Baker, GP ⁷⁰	383—165 N. 2nd St.	Albemarle
Gasque, Mac Roy, Ind ⁷²	Ecusta Paper Corp.	Pisgah Forest
Gast, Charlotte Marie, GP ¹³	7171—353 1st Ave.	Hickory
*Gaul, John Stuart, (Hon.) Or ⁵⁰	ED 2-8614—315 Prof. Bldg.	Charlotte
*Gaul, John Stuart, Jr., Or ⁵⁰	ED 2-8614—403 N. Tryon Street	Charlotte
*Gay, Charles Houston, Pd ⁵⁰	4-0891—1012 Kings Drive	Charlotte
*Geddie, Kenneth Baxter, (Hon.) Pd ³²	4074—641 N. Main St.	High Point
Gentry, George W., (Hon.) GP ⁵⁹	4941—Box 146	Roxboro
*Gentry, William Harold, T ³⁸	Aberdeen 9131—N. C. Sanatorium	McCaun
*Georgiade, Nicholas, PL ²³	9011—Duke Hospital	Durham
Ghent, Thomas D., Oph ⁵⁰	FR 6-5459—110 N. Torrence St.	Charlotte
Gibbon, James Wilson, (Hon.) S ⁵⁰	ED 2-4169—403 N. Tryon St.	Charlotte
Gibbs, Robert Louis, S ⁸	2-6464—807 Public Service Bldg.	Asheville
*Gibbs, Stuart Wynn, R ²⁷	5-0071—Medical Building	Gastonia
*Gibson, Francis Duncan, Jr., GP ⁶⁴	6071—Box 148	Fairmont
Gibson, Laurence Osborne, (Hon.) ObG ³⁹	P.O. Box 671	Statesville
*Gibson, Mack Wilson, GP ¹⁴	3511—P.O. Box 738	Goldston
Gibson, Milton Reynolds, (Hon.) Ret. ⁷⁵	105 Chamberlain St.	Raleigh
Gilbert, George Gaylord, U ⁸	2-3281—409 Flatiron Bldg.	Asheville
*Gill, Joseph Armstrong, Ob ⁵⁸	5415—1502 Carolina Ave.	Elizabeth City
Gillespie, S. Crawford, I ⁸	7711—806 Flatiron Bldg.	Asheville
Gilliam, Charles Franklin, GP ²¹	2398—54 Salem Street	Thomasville
Gilliam, James S., Jr., U ³²	3050—527 N. Main St.	High Point
Gilmore, Clyde Manly, I ³²	3-6911—342 N. Elm St.	Greensboro
Gilmour, Monroe Taylor, I & C ⁵⁰	ED 4-4616—1351 Durwood Dr.	Charlotte
Givens, George H., Jr., GP ³⁹	2270	Taylorsville
Glascock, Donald W., GP ²²	3401—Newton Bldg.	Faison
Glasgow, Douglas McKay, I ⁵⁰	FR 5-5674—1012 Kings Drive	Charlotte
*Glasson, John, Or ²³	3-3001—306 S. Gregson St.	Durham
*Glenn, Channing, GP ⁷	3640—P.O. Box 335, Robeson St.	Elizabethtown
Glenn, Charles Arthur, S ²⁷	7371—218 N. Highland St.	Gastonia
Glenn, Charles Foster, S ⁶⁷	3364—Rutherford Hosp.	Rutherfordton
Glenn, Dorothy Norman, ObG ²⁷	6386—206 N. Highland St.	Gastonia
Glenn, Henry Franklin, Jr., GP ²⁷	210 S. York St.	Gastonia
Glenn, John C., Jr., R ⁵⁰	ED 4-6831—2000 E. Fifth St.	Charlotte 4
Glenn, Lucius Newton, (Hon.) S ²⁷	5-4993—P.O. Box 1144	Gastonia
*Glod, Albert P., S ²⁵	5-3702—405 N. Spring St.	Winston-Salem
Glover, Francis O., GP ⁶⁶	74—504 Wallace Bldg.	Salisbury

*Present at 1955 meeting

Gobble, Fleetus Lee, Jr., ObG ²⁵	4-1131—612 W. Fifth St.	Winston-Salem
Gobel, William Ken, GP ²¹	96M—Box 232	Denton
Godwin, Harold L., I ²⁰	2-3009—206 Park St.	Fayetteville
Gold, Ben M., Jr., ObG ²⁴	2-4134—410 Peachtree St.	Rocky Mount
Gold, Ben, (Ket.) Pd ¹⁷		Shelby
Goddner, J. Leonard, Or ²³	9011—Duke Hosp.	Durham
Goldsmith, Jewett, P ²³	9011—Box 3134—Duke Hosp.	Durham
*Goley, Willard Coe, GP ¹	7467—214 N. Marshall St.	Graham
Goode, Thomas Vance, (Hon.) S ³⁹	7253—H. F. Long Hosp., Inc.	Statesville
Goode, Thomas V., III, S ³⁹	7253—766 Hartness Rd.	Statesville
Goodman, Benjamin W., GP ¹³	2204—Hickory Memorial Hosp.	Hickory
Goodman, E. G., I & A ³¹		Leland
Goodwin, Cleon Walton, S ⁷⁹	7-1182—Wilson Clinic	Wilson
*Goodwin, Oscar Sexton, GP ⁷⁵	4831—Raleigh Rd., Box 368	Apex
*Gordon, John Simpson, ALR ⁵⁰	4-5531—412 N. Church St., Nalle Clinic	Charlotte
Goswick, Harry Wilson, Jr., S ²⁵	3-5781—416 Reynolds Bldg.	Winston-Salem
Gottschalk, Carl W., I & C ²³	9031—N. C. Memorial Hospital	Chapel Hill
Goudelock, John Jefferies, (Hon.) GP ⁷³	AT 3-6712—Box 227, 136 S. Main St.	Monroe
*Goudge, Mabel Ensworth, P ²³	4-4052—W. Main St.	Durham
*Gouge, Arthur Edward, (Hon.) GP ⁵¹	2331	Bakersville
Gouldin, John Milton, III, GP ⁹	5921	Elm City
*Gradis, Howard Henry, S ⁶⁰	3916—203 E. Third St.	Greenville
Grady, Edward Stephen, PH ⁴¹	2700—123 Bridge St.	Smithfield
Grady, Franklin M., GP ¹⁹	3624—Box 1087	New Bern
*Graham, Charles Pattison, S ⁵¹	3-1691—304 N. 11th St.	Wilmington
Graham, David Eric, GP ⁵¹		Spruce Pine
*Graham, John Borden, Path & Ed ²³	9031—Box 1020	Chapel Hill
*Graham, Walter Raleigh, Oph ⁵⁰	FR 5-7464—1012 Kings Drive	Charlotte
*Graham, Wm. Alexander, ObG ²³	6749—620 Vickers Ave.	Durham
Grant, Henry Boone, Pd ²⁴	6211—416 Hickory St.	Rocky Mount
Grantham, Wilmer Lloyd, (Hon.) U ⁸	2-6464—93 Patton Ave.	Asheville
Gray, Cyrus Leighton, R ³²	7926—225 Boulevard St.	High Point
Green, Harold David, I ²⁵	4-6361—Bowman Gray Sch. of Med.	Winston-Salem
*Green, Philip P., Path ⁵³	2-5131—435 E. Indiana Ave.	Southern Pines
Green, Williams Wills, (Hon.) S ²⁴	3101—305 St. Andrews St.	Tarboro
Greene, Phares Yates, GP ¹	6-5691—Box 1205	Burlington
*Greene, Wm. Alexander, GP ¹⁸	338—104 E. Commerce St., Box 103	Whiteville
Greenwood, Adolphus Barte, (Hon.) U ⁸	2-4080—Route 2, Box 275	Asheville
*Greenwood, James Brooks, Jr., GP ⁵⁰	FR 6-8775—5 E. Doctors Bldg.	Charlotte
Gregory, John E., Path ⁶⁶	538—Rowan Memorial Hosp.	Salisbury
Grier, Charles Talmage, (Hon.) GP ⁵³	4021—Box 475	Carthage
*Grier, John Calvin, Jr., PN ⁵³	5972—Carthage Rd., Wellesley Bldg.	Pinehurst
Griffin, Harold Walker, OALR ¹³	2-6716—342 2nd St., N. W.	Hickory
*Griffin, Harvey Lee, GP ⁶²	2135—Griffin Clinic	Asheboro
Griffin, Leslie W., GP ³¹	2912	Erwin
Griffin, Mark Alexander, (Hon.) PN ⁸	3-5661—Appalachian Hall	Asheville
Griffin, Mark Alexander, Jr., PN ⁸	26 Edgemont Road	Asheville
Griffin, Thomas Ray, GP ³⁹	3071—Box 328	Troutman
†Griffin, Wm. Ray, (Hon.) PN ⁸	3-5661—Appalachian Hall	Asheville
Griffin, William R., Jr., PN ⁸	Appalachian Hall	Asheville
*Griffin, William Robert, GP ⁶⁹	Box 326	Laurinburg
*Griffis, John William, GP ²¹	96-M	Denton
Griffith, Franklin Webb, (Hon.) Ret. S ⁸	Langchamp Apts.	Asheville
Griffith, Lewie Muller, (Hon.) OALR ⁸	2-1371—301 Haywood Bldg.	Asheville
Griffith, Mary Irene, ObG ²⁵	4-7321—116 Lockland Ave.	Winston-Salem
*Griggs, Boyce Powell, GP ¹⁵	Regent 5-5151—Craig Bldg.	Lincolnton
*Griggs, Willard Wilson, GP ⁷⁰	199—P.O. Box 217	Norwood
*Grimmett, Matthew Hill, Pd ¹⁰	4223—Ardsley Road	Concord
Grimsley, William T., GP ³²	4781—Box 157	Guilford College
Grimson, Keith Sanford, S ²³	9011—Duke Hosp.	Durham
Groat, Richard A., GP ²⁵	201½ Eden Terrace	Winston-Salem
Groome, James Gordon, (Hon.) GP ³²	3423—517 N. Main St.	High Point
Gross, Francis Warren, OALR ³²	3423—517 N. Main St.	High Point
Gross, Frank Blackburn, Jr., I ⁸	2-1568—10 Vanderbilt Place	Asheville
Grosskrentz, Doris Clare, Anes ²³	9031—N. C. Mem. Hospital	Chapel Hill
*Grove, Raymond F., Oph ⁵¹	3-1532—905 Murchison Bldg.	Wilmington
*Groves, Robert Burwell, (Hon.) GP ²⁷	4-1194	Lowell
*Groves, Robert B., Jr., GP ²⁷	2221—N. Main St.	Belmont
*Gullingsrud, Miles J. O., PH ⁶⁵		Leaksville
Gunn, Charles G., Jr., I ⁷²	Ford Eng. Staff, Ind. Relations, Box 2053, Dearborn	Mich.
Gunter, Arthur Rhett, I & GE ⁵⁰	FR 5-3025—1205 E. Morehead St.	Charlotte
*Gunter, June U., Path & CP ²³	8-1231—Watts Hosp.	Durham
Gunter, Van Wyke, Ins ³²	3-6971—Jefferson Bldg.	Greensboro
Guiganus, George Elwood, OALR ⁵⁶	7474—New River Clinic	Jacksonville

* Present at 1955 meeting

† Deceased

Gwynn, Houston Lafayette, (Hon.) GP ¹	2436	Yanceyville
*Gwynn, Thomas Lea, GP ¹	2436	Yanceyville
Haar, Frederick Behrend, Pd ⁶⁰	2039—State Bk. Bldg.	Greenville
Hackler, Robert Hardin, Jr., R ⁵	1335—120 Washington St.	Washington
Hadley, Herbert Wood, GP ⁶⁰	3172—200 E. 10th St.	Greenville
Hagaman, John Bartlett, (Hon.) GP ³		Boone
Hagaman, John Bartlette, Jr., GP ³		Boone
Hagaman, Len Doughton, GP ³	AM 4-3923—229 E. King St.	Boone
Hagna, Lewis William, GP ⁴⁹	6251—10 S. Logan St.	Marion
*Haines, Hilton Drummond, ObG ⁶³	3966—118 S. Lawrence St.	Rockingham
Hairfield, Beverly Dew, S ⁹	606—110½ S. Sterling St.	Morganton
Hall, James Brownlee, R ⁵⁰	5-0468—Presbyterian Hosp.	Charlotte
Hall, John Moir, GP ⁷¹	W. Main St.	Elkin
*Hall, Joseph Cullen, ObG ⁶⁶	142—500 Mocksville Ave.	Salisbury
*Hall, Rowena Sidbury, Pd ⁵⁴	2-2824—920 South 17th St.	Wilmington
Hall, William Dewey, GP ³³	7-4661—Box 388.	Roanoke Rapids
Hall, William Hugh, Pd ⁵⁰	ED 2-4167—1505 Elizabeth Ave.	Charlotte
Ham, Clem, PH ⁷³	Atlantic 3-6124—200 S. Hayne St., Box 23.	Monroe
Ham, George C., P ²³	9031—UNC Med. School.	Chapel Hill
Hamblen, Edwin Crowell, Endoc ²³	9011—Duke Hospital.	Durham
Hambrick, Robert T., (Hon.) Pr ¹³	4416—3 Third Ave., N. W.	Hickory
Hamer, Alfred Wilson, GP ⁹	672—317 N. Green St., Box 756.	Morganton
*Hamer, Douglas, Jr., GP ¹¹	4-5356—Fidelity Bldg.	Lenoir
Hamer, Eugene Floyd, GP ⁷³	AT 3-3914—Box 476.	Monroe
Hamer, Jerome B., S ⁰	1521 Elizabeth Ave.	Charlotte
*Hamer, William Alexander, Anes ⁵⁰	4-6831—Mercy Hosp.	Charlotte
*Hamilton, Alfred T., S ⁷⁵	8331—309 Hillsboro St.	Raleigh
*Hamilton, John Homer, PH ⁷⁵	4-3611, Ext. 7145—214 W. Jones St.	Raleigh
Hammett, Doris Bixley, Pd ³⁵	Glendale 6-3112—Box 827.	Waynesville
Hammond, Alfred Franklin, Jr., GP ¹⁹	3118—412 Broad St.	New Bern
Hamrick, John Carl, S ¹⁷	9931—P.O. Box 28, Shelby Medical Center.	Shelby
Hamrick, Ladd Watts, Jr., I ¹⁰		Concord
Hand, Edgar Hall, (Hon.) PH ⁵⁰		Pineville
Hand, LeRoy, Jr., GP ²⁸	2261—Gates Clinic.	Gatesville
Hanes, Gideon I., Jr., ObG ²⁵	3-4057—O'Hanlon Bldg.	Winston-Salem
Hankins, Joseph Banks, ObG ²¹	2958—20 W. Fifth Ave.	Lexington
*Happer, William, PH ¹¹	4-4241—Health Dept.	Lenoir
Hansen-Pruss, Oscar Carl Edward, I & A ²³	9011—Duke Hosp.	Durham
Harbison, John William, (Hon.) S ¹⁷	6671—Prof. Bldg.	Shelby
Hardawav, John Stegar, GP ³⁹	2-1156—238 West Broad Street.	Statesville
Hardee, Walter Person, (Hon.) OALR ²³	2-4891—123 West Main St.	Durham
Harden, Boyd, ObG ¹	6-6659—Box 1006.	Burlington
Harden, Graham, (Hon.) GP ¹	6-5146—P.O. Box 27, 347 S. Spring St.	Burlington
Harden, Robert Norman, (Hon.) S ³²	2-6230—101 N. Elm St.	Greensboro
*Hardin, Eugene D., PH ¹⁹	3121—P.O. Box 1290.	New Bern
Hardin, Eugene Ramsey, (Hon.) PH ⁶⁴	3246—Box 1088 Robeson Co.	
	Health Dept.	Lumberton
Hardin, Richard Henry, GP ¹⁶	597—Box 469.	Edenton
Harding, B. H., GP ⁷¹		Elkin
Harding, Samuel Asberry, (Hon.) GP ²⁵	21 Court Square.	Mocksville
Hardman, Edward Francis, ObG ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte
Hardre, Rene, Path ⁷⁵	Rex Hospital.	Raleigh
Hare, Roy Allen, I ²³	8-2087—1200 Broad St.	Durham
Harer, A. Eugene, Or ⁷⁵	4-3971—Bryan Bldg.	Raleigh
Hargrove, Eugene A., P ²³	9031 Ext. 572—N. C. Mem. Hosp.	Chapel Hill
*Harloe, John Pinckney, GP ⁵⁰	ED 4-7833—508 Prof. Bldg.	Charlotte
*Harmon, Raymond Harris, OALR ³	AM 4-3651—307 E. King St.	Boone
Harrell, William Fletcher, Jr., Pd ⁵⁸	7792—Guaranty Bank Bldg., P.O. Box 286.	Elizabeth City
Harrelson, R. C., Jr., GP ¹⁸	3431—Box 588.	Tabor City
Harrill, Henry Clay, U ³²	3-2583—363 N. Elm St.	Greensboro
*Harrill, James Albert, ALR ²⁵	2-5790—Bowman Gray Sch. of Medicine.	Winston-Salem
Harrill, Lawson Baxter, (Hon.) GP ⁶⁷	2751—Box 176.	Caroleen
Harrington, Lee, Jr., Ind ²⁵	7171—Reynolds Tobacco Co.	Winston-Salem
Harris, Carlton McK., I ³²	2-5675—220 Med. Arts Bldg.	Greensboro
*Harris, Charles I., Jr., GP ⁴⁸	2186—Martin Gen. Hosp.	Williamston
Harris, C. Theodore, GP ⁶⁶	366—102 W. Innes St.	Salisbury
Harris, Grace Swinburne, GP ²⁰	2-4925—809 Westmont Dr.	Fayetteville
*Harris, Isaac Emerson, Jr., S & Pr ²³	8-1261—Durham Surgical Clinic, 1200 Broad St.	Durham
*Harris, Russell P., Jr., S ⁶⁵	Main 3-6281—201 Henry St.	Leaksville
Harriss, Andrew Howell, (Hon.) Ret. GP ⁵⁴	609 Dock St.	Wilmington
*Harris, Jerome Sylvan, Pd ²³	9011—Duke Hosp.	Durham
*Harry, John McKamie, S & U ²⁰	3-0136—Highsmith Hosp.	Fayetteville
*Hart, Julian Deryl, S ²³	9011—Box 3704 Duke Hosp.	Durham

*Hart, Lillard Franklin, GP ⁷⁵	4821—P.O. Box 365, Martin Bldg.	Apex
*Hart, Oliver James, U ²⁵	2-1504—414 Reynolds Bldg.	Winston-Salem 3
Hart, Verling Kersey, (Hon.) ALR ⁵⁰	ED 3-1131—106 W. 7th St.	Charlotte 2
*Hartman, Bernhard Henry, Pd ⁸	2-6271—607 City Bldg.	Asheville
*Hartness, William Rufus, GP ⁴³	2-2641—207 E. Main St.	Sanford
Harvey, Wallace Watson, (Hon.) Ind ³²	118 S. Green St.	Greensboro
*Hatcher, Martin Armistead, (Hon.) GP ⁶³	142—31 Hamlet Ave.	Hamlet
Hatcher, Samuel W., GP ¹²	6-3127—102 S. 21st St.	Morehead City
Hawes, Cecil Jennings, U ⁵⁰	FR 5-5526—1333 Romany Rd.	Charlotte
Hawes, Charles Forest, GP ²²	Box G	Rose Hill
*Hawes, George Aubrey, U ⁵⁰	FR 5-5526—1333 Romany Rd.	Charlotte
Hawes, James Beebe, OALR ⁵	274—Box 440, Bank of Wash. Bldg.	Washington
Hawkins, Barry Fugh, I ¹⁰	3241—26 Patton Ave.	Concord
Hawkins, David R., P ²³	9031—401 Pritchard Ave.	Chapel Hill
Hawkins, James Hubert, GP ¹	7496—114 ¹ / ₂ N. Main St.	Graham
Hawkins, Hal B., GP ⁷⁸	1351-J	Moravian Falls
*Hayes, James Willard, GP ⁶¹	6901—Box 392, South Main St.	Fairmont
Hayes, William Clayton, GP ⁷⁸	Box 191	Wilkesboro
*Haywood, Hubert B., Jr., Oph ⁷⁵	8337—419 Prof. Bldg.	Raleigh
*Haywood, Hubert Benbury, Sr., (Hon.) Ins ⁷⁵	3-6411—634 N. Blount St.	Raleigh
Head, William Thomas, (Hon.) GP ⁶⁷	Tryon 287-M	Melvin Hill
Heath, Hunter, GP ²²	Wallace 5349	Chiniquapin
Hedgepeth, Albert William, GP ²⁴	6008 Woodside Dr.	Jacksonville 10, Fla.
Hedgepeth, Emmett Martin, GP ⁵⁹		Roxboro
*Hedgepeth, Edward McGowan, I ²³	P.O. Box 87	Chapel Hill
*Hedgepeth, Louten Rhodes, OALR ⁶⁴	5244—Box 1081, Medical Arts Bldg.	Lumberton
Hedgepeth, William Carew, ObG ⁶⁴	4923—Box 1021	Lumberton
*Hedrick, Clyde Reitzel, GP ¹¹	Plaza 4-7861—Box 619, Hedrick Bldg.	Lenoir
Hedrick, Richard E., ObG ²⁵	4-5454—857 W. Fifth St.	Winston-Salem
*Hege, John Roy, (Hon.) PH ¹⁰	2125—Box 1149, County Health Dept.	Concord
Heffner, Bain L., I ¹	6-1659—330 W. Front St.	Burlington
*Heinitsh, George, OALR ⁵³	2-7921—125 E. Pennsylvania Ave.	Southern Pines
*Helms, Jefferson Bivins, GP ⁹	1440-41—403 S. King St.	Morganton
Helsabeck, Belmont Augustus, Oph ²⁵	3-1041—324 Reynolds Bldg.	Winston-Salem
Helsabeck, Chester Joseph, (Hon.) GP ²⁵	2621—Box 416	Walnut Cove
Helsabeck, Rupert Sylvester, GP ²⁵		King
Hemphill, Clyde Hoke, (Hon.) I ⁴⁶	1401 N. 21st Place	Phoenix, Arizona
*Hemphill, James Eugene, R ⁵⁰	FR 5-2579—1420 E. 5th St.	Charlotte 4
*Henderson, Andrew McKnitt, Jr., GP ³⁹	3-5341—252 W. McLelland	Mooresville
Henderson, Clair Crouse, (Hon.) GP ⁷⁷	Center St.	Mt. Olive
*Henderson, John Percy, (Hon.) GP ⁵⁶	3350—417 College St., Box 207	Jacksonville
*Henderson, John P., Jr., GP ³⁶		Sneads Ferry
Hendrick, Harry V., S ⁶⁷	3364—Rutherford Hospital	Rutherfordton
Hendricks, Paul Eugene, GP ¹⁷	521—Box 829	Kings Mountain
Hendrix, James Paisley, I ²³	9011—Duke Hosp., Box 3408	Durham
Henley, Ruth Dixon, ObG ²⁵	2-4687—718 Nissen Bldg.	Winston-Salem
Henninger, Joseph Baylor, I ³⁹	7789—652 Davie Ave.	Statesville
Henry, Tidal Boyce, (Hon.) GP ⁶³	3551—Watson Bldg.	Rockingham
Hensley, Charles Albert, GP ⁵	7411—500 Medical Bldg.	Asheville
*Henson, Joseph Bascom, Jr., GP ³²	4-4347—1029 Madison Ave.	Greensboro
*Henson, Thomas Albert, Pd ³²	2-1926—369 N. Elm St.	Greensboro
Herbert, William Pinkney, (Hon.) S ⁸	Cedar Valley Farms	Laurence, S. C.
*Herman, John D., GP ²⁰	2-3780—#8 Market Square	Fayetteville
Herrin, Keith Hermon, OALR ²⁷	5-3732—212 W. 2nd St.	Gastonia
Herring, Edward Humphrey, S ⁷⁵	4-0342—700 W. Morgan St.	Raleigh
Herring, T. Tilghman, S ⁷⁹	7-1182—Wilson Clinic	Wilson
Hester, Joseph Robert, (Hon.) GP ⁷⁵	3401—Box 157	Wendell
Hester, William Shepherd, S ⁶⁵	4310—216 Main St.	Reidsville
*Heusner, A. Price, NS ²³	9031—UNC Mem. Hosp.	Chapel Hill
*Hewitt, Willard C., T & I ³⁸	N. C. Sanatorium	McCain
Heyman, Albert, N ²³	910 Arrowhead Road	Chapel Hill
*Hiatt, Joseph Spurgeon, Jr., I & T ³⁸	2-2681—208 S. W. Broad St.	Southern Pines
Hickam, John Bamber, I ²³	9011—Box 3703 Duke Hosp.	Durham
*Hickman, Harry Stuart, Pd ¹¹	Plaza 4-5051—129 W. Ashe St.	Lenoir
Hicks, Vonnice Monroe, (Hon.) Oph ⁷⁵	8846—127 W. Hargett St.	Raleigh
Higgins, Kenneth Ellis, Ind ⁸	336 W. Keith St.	Fort Wayne, Ind.
High, Larry Allison, GP ²⁴	4671—Boddie St.	Nashville
*Highsmith, Charles, S ⁵²	5511—C/o Montgomery Memo. Hosp.	Troy
Highsmith, George Perry, I ²¹	897—52 Salem St.	Thomasville
*Highsmith, William Cochran, I ²⁰	3-0136—Highsmith Hosp.	Fayetteville
Highsmith, William Jesse, Jr., GP ⁴⁸	481—Box 166	Hamilton
*Hightower, Felda, S ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
*Hilderman, W. C., Jr., S ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte 2
*Hill, Millard Daniel, GP ⁷⁵	7632—15 W. Hargett St.	Raleigh
*Hill, William Henry, GP ⁷⁰	1024—115 South St.	Albemarle
Hillier, William F., Jr., NS ⁸	2-6725—City Hall Bldg.	Asheville

Himmelwright, Gable G., S ⁴⁸	2186—Williamston Clinic	Williamston
*Hinman, Alanson, Pd ²⁵	4-6361—Bowman Gray	Winston-Salem
Hinman, Havilah E., Ob ⁸	3-6747—410 City Hall	Asheville
Hinnant, Milford, (Hon.) GP ¹¹		Micro
*Hipp, Edward Reginald, Sr., (Hon.) S ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte
Hipp, Edward Reginald, Jr., S ⁵⁰	Univ. of Va. Hosp.	Charlottesville, Va.
*Hitch, Joseph Martin, D ⁷⁵	5588—415 Prof. Bldg.	Raleigh
*Hodges, Horace Hayden, I & GE ⁵⁰	ED 4-4616—1351 Durwood Dr.	Charlotte 3
Hodgin, Henry Hiram, (Hon.) GP ⁶⁴		Red Springs
Hoggard, John Thomas, (Hon.) GP ⁵⁴	7702—504 Orange St.	Wilmington
Hoggard, William Alden, (Hon.) GP ¹⁶	Elizabeth City 2050	Hertford
*Hoggard, William Alden, Jr., GP ⁵⁸	7397—1502 Carolina Ave.	Elizabeth City
*Hogshead, Ralph, Jr., GP ⁹	126—114 S. Sterling St.	Morganton
Hohman, Leslie Benjamin, PN ²³	9011—Duke Med. Sch.	Durham
*Holbrook, Joseph Samuel, I & C ³⁹	9086—Davis Hosp.	Statesville
Holbrook, William Douglas, PN ⁵⁰	7-1152—1111 E. Morehead St.	Charlotte
Holden, Howard Thompson, OALR ⁵⁰	FR 6-5034—207 N. Torrence St.	Charlotte
Hollandsworth, L. C., GP ²⁵	Old Town WA 4-2085—Rt. 1	Winston-Salem
Hollister, William, GP ¹⁹	3477—P.O. Box 1107	New Bern
*Hollister, William Fredwin, S ³³	5611—Moore County Hosp.	Pinehurst
*Holloway, Joseph Clark, GP ²³	4-6411—212 W. Main St.	Durham
Hollowell, Victor Boyce, S ⁵⁰	FR 5-0938—229 N. Torrence St.	Charlotte
Hollyday, William Murray, (Hon.) OALR ⁸	9921—20 Battery Park Ave.	Asheville
Holmes, Andrew Byron, (Hon.) GP ⁶⁴	3011—112 Church St., Box 413	Fairmont
*Holmes, George Washington, Or ²⁵	2-4860—620 Nissen Bldg.	Winston-Salem
*Holt, Duncan Waldo, (Hon.) I ³²	7232—207 Piedmont Bldg.	Greensboro
*Holt, Lawrence Beyerly, Oph ²⁵	4-2231—209 Reynolds Bldg.	Winston-Salem
Holt, Thomas, OALR ⁷⁶	5591—11 Fairview Street	Warrenton
Holt, Thomas Jefferson, (Hon.) GP ⁷⁶		Warrenton
Holt, William Preston, (Hon.) S ³⁴		Erwin
Holton, Alfred J., GP ²⁶	553-6—Franklin County Health Center	Louisburg
Hooks, Richard Eugene, GP ⁶⁴	2281—P.O. Box 306	St. Pauls
*Hooper, Delos D., (Hon.) GP ⁴⁰	22	Sylva
*Hooper, Joseph Ward, Jr., U ⁵⁴	3-6252—410 N. 11th Street	Wilmington
Hoot, Melvin P., OALR ⁶⁰	2711—521 Evans St.	Greenville
Hoover, William Alonzo, S ¹⁵	28—Petrie Hosp.	Murphy
Hope, Alex Chalmers, GP ⁵⁰	ED 3-4292—1057 E. Morehead St.	Charlotte
Horn, Helen A., Path ³²	2252-1—High Point Mem. Hosp.	High Point
*Horne, Stephen Francis, D ²⁴	6-4922—122 Hammond St.	Rocky Mount
Horner, Jack C., S ⁵¹	Poplar 5-4201—Williams Clinic	Spruce Pine
Hornowski, M. J., PS	4-1062—394 Merrimon Ave.	Asheville
Hornstein, Norman M., GP ⁵⁴	5971	Southport
Horsley, Howard Theodore, GP ⁴⁶	43—Box 521	Franklin
Horsley, Thomas Martin, I ⁵⁸	7419—508 E. Main St.	Elizabeth City
Horsley, William N., GP ²⁷	5376—28 E. Woodrow Ave.	Belmont
Horton, Miles Christopher, (Hon.) Ret., OALR ⁷⁵	Box 137	Pine Bluff
Hoskins, John Robison, III, Anes. ⁸	2-6151—23 Flint St.	Asheville
Hoskins, William Hume, I ¹⁸	3720—Main St.	Whiteville
Hough, Mac Johnson, Oph ⁵⁰	FR 7-1304—1012 Kings Drive	Charlotte
*Houser, Forest Melville, GP ²⁷	9252—106 E. Main St.	Cherryville
Houser, Oscar Julian, (Hon.) Oph ⁵⁰	ED 2-4063—219 Prof. Bldg.	Charlotte
Hovis, Leighton Watson, (Hon.) OALR ⁵⁰	ED 2-2126—403 N. Tryon St.	Charlotte 2
Howard, Corbett Etheridge, R ⁷⁷	614—Drawer 1141	Goldsboro
Howard, J. Cooper, S ⁶⁸	3232—Sampson Co. Mem. Hosp.	Clinton
Howell, Charles M., Jr., D ²⁵	2-3901—405 N. Spring St.	Winston-Salem
Howell, Julius A., Res ²⁵	2-3901—405 N. Spring St.	Winston-Salem
*Howell, William Lawrence, (Hon.) GP ⁶³	2261—Box 83	Ellerbe
*Hubbard, Frederick Cecil, (Hon.) S ⁷⁸	350—Box 30, 408 Eighth St.	N. Wilkesboro
Hubbard, Robert Thomas, GP ⁸	2-1585—304 Med. Bldg.	Asheville
Hucherie, Mark H., Ind ⁴⁴	7-0111—Du Pont	Kinston
Hudson, Miles H., GP ⁹	2152—Valdese Gen. Hosp. Clinic	Valdese
Hudson, William R., GP ³⁵	6603—21 Park St.	Canton
Huey, Thomas W., Jr., ObG ⁵⁰	5-4216—1012 Kings Drive	Charlotte
Huffines, Thomas Ruffin, (Hon.) U ⁸	2-3281—20 Battery Park Ave.	Asheville
Huffman, S. Vance, GP ¹	Burlington 9975—RFD 2	Elon College
*Hughes, Carlisle Bee, Jr., S ⁷¹	4511—Box 326	Yadkinville
*Hughes, Jack, U ²³	8-1297—1200 Broad St.	Durham
Huizenga, Ann Harriet, Ob ⁶⁰	4131—1801 E. 4th St.	Greenville
*Humbert, Walter Cowden, PH ⁶⁰	4209—Box 726	Greenville
Humphrey, Edward M., GP ²¹	13-2324—Route 3	Lexington
*Humphries, Charles O., I ²³	8-2432—1200 Broad St.	Durham
Hundley, Deane, Jr., GP ²²	4191—219 E. Main St., Box 592	Wallace
Hunt, Jasper Stewart, Pd ⁵⁰	ED 2-8145—1523 Elizabeth Ave.	Charlotte
Hunt, John Franklin, (Hon.) GP ⁶⁷	4949—306 Maryland Ave.	Spindale
*Hunt, Walter Skellie, Jr., Or ⁷⁵	8331—309 Hillsboro St.	Raleigh
*Hunt, William Bryce, Sr., (Hon.) GP ²¹	2260—23 E. Center St.	Lexington

Hunt, William Jack, I ³²	6928—136 Church St.	High Point
Hunter, Frank Patterson, GP ⁷⁶	2571—Box 647	Warrenton
Hunter, John B., GP ¹⁷	6338—616 E. Marion St.	Shelby
Hunter, John Gray, S ³²	4-7998—2310 Lafayette Ave.	Greensboro
*Hunter, John Pullen, (Hon.) GP ⁷⁵	2681—Box 94, 124 S. Academy St.	Cary
Hunter, Shelton Brinsen, Jr., GP ⁴¹	2251—P.O. Box 128	Kenly
Hunter, William Blair, (Hon.) PH ³¹	4251—Harnett County Health Dept.	Lillington
Hunter, William Cooper, GP ⁷⁹	6135—103 N. Pine St.	Wilson
Huntington, Sterling Hicks, GP ¹	6-1966—751 E. Davis St., Manson Bldg.	Burlington
Huntley, Robert Ross, GP ⁷⁶	4661—Box 707	Warrenton
Hurdle, Samuel Walker, (Hon.) Ins ²⁵	7826—2571 W. 1st St.	Winston-Salem
Hurdle, Thomas G., U ²⁰	2-9524—327 Ray Avenue	Fayetteville
Hussey, Howard S., Jr., GP ²⁴	3805—300 St. Patrick St.	Tarboro
Hutaff, Lucille West, I ²⁵	4-6361 Ext. 241—Bowman Gray Sch. of Medicine	Winston-Salem
*Hutchinson, Sankey Smith, (Hon.) GP ⁷	2121—Box 278	Bladenboro
Hyde, Frank Edward, (Ret.) GP ¹²	Route 1, Box 267	Tucson, Arizona
*Ingalls, Clair Lacey, S ⁶³	5050—Prof. Bldg.	Rockingham
Ingram, Charles Hal, S ³²	6552—330 Locke St.	High Point
Ingram, Phyllis Ray, S ²³	1006 Demerius St.	Durham
Ingram, William Braxton, MCUSMR, Lt, GP ⁵⁰	V. S. 30NAS.	Norfolk, Va.
*Inman, Charles Ernest, GP ⁶⁴	6901—South Main Street	Fairmont
*Irons, C. Federick, GP ⁶⁰	4131—Box 1001, 1001 E. 4th St.	Greenville
Irons, Malene Grant, Pd ⁶⁰	5030—801 Evans St.	Greenville
*Irwin, Henderson, (Hon.) GP ⁷⁷	Fremont 2121—Box 26	Eureka
Izlar, Henry LeRoy, (Hon.) GP ²⁵	8684—942 W. Fourth St.	Winston-Salem
Izlar, Henry LeRoy, Jr., I ²³	5-2201—306 S. Gregson St.	Durham
†Jabaut, Seward W., PH ³⁵	67 Balsam Drive	Waynesville
Jackson, Marshall Vaden, GP ⁴¹	3161—Box 87	Princeton
Jackson, Walter Leo, (Hon.) S ³²	Route 4	High Point
Jacobs, Julian Erick John, Or ⁵⁰	FR 6-5686—123 W. 7th St.	Charlotte 2
*Jacocks, William Picard, (Hon.) Ret., PH ⁴⁵	Carolina Inn	Chapel Hill
*Jacques, Robert Samuel, GP ¹⁴	2411—Mathiesen Clinic	Pittsboro
*James, Arthur Augustus, Jr., I ⁴³	Spring 3-6931—109 S. Steele St., P.O. Box 1051	Sanford
*James, George W., D ²⁵	6155—205 S. Hawthorne Rd.	Winston-Salem
*James, Richard T., Jr., I ⁵⁰	ED 3-8661—217 Travis Ave.	Charlotte
*James, William Duer, Jr., S ⁶³	155—Hamlet Hosp.	Hamlet
Jameson, E. Carleton, S ⁶⁹	8417—Thouron Ave.	Philadelphia 19, Pa.
Jamison, Andrew Marshall, Jr., I ⁵³	2-3401—510 N. W. Broad St.	Southern Pines
Jarman, Fontaine Graham, Sr., (Hon.) S ³³	7-2595—402 Hamilton St.	Roanoke Rapids
*Jarman, Fontaine Graham, Jr., S ³³	7-2595—Roanoke Rapids Hosp.	Roanoke Rapids
Jenkins, Albert M., R ⁷⁵	2-6331—227 Bryan Bldg.	Raleigh
Jeffreys, Everett O., NS ²⁵	4-6871—705 O'Hanlon Bldg.	Winston-Salem
*Jennings, Lowell E., GP ²⁷	5-4231—213 W. Main St.	Gastonia
Jennings, Royal G., D ³²	6966—519 N. Main St.	High Point
*Jervey, William St. Julien, R ¹⁷	4321—Shelby Hosp.	Shelby
Jessner, Lucie, P ²³	N. C. Memo. Hosp.	Chapel Hill
*Jeter, R. Vernon, GP ⁷⁵	Plymouth Clinic	Plymouth
John James E., Jr., GP ⁶⁵	5132—P.O. Box O	Mayodan
*Johnsen, Lynn L., T ³⁸	Aberdeen 9131—N. C. Sanatorium	McCain
*Johnson, Amos Neill, GP ⁶⁸	21-1	Garland
*Johnson, Charles Thomas, (Hon.) GP ⁶¹	2801	Red Springs
Johnson, Charles Thomas, Jr., GP ⁶¹		Red Springs
Johnson, David Spires, Path ²³	942 Lambeth Circle	Durham
Johnson, Floyd, (Hon.) PH ¹⁸	2834—Columbia Co. Health Dept., Box 786	Whiteville
*Johnson, Gale Denning, S ³⁴	The Doctor's Office Bldg.	N. Wilkesboro
Johnson, Gaston Frank, R ²⁵	4-7431—Nissen Bldg., V.A. Regional Office	Winston-Salem
*Johnson, George W., (Hon.) ObG ⁵⁴	7541—201 N. Front St.	Wilmington
*Johnson, Harry Lester, S ⁷¹	338—P.O. Box 530	Elkin
Johnson, Heber W., GP ⁵⁴	5062—121 S. 17th St.	Wilmington
Johnson, John Brown, (Hon.) S ⁴⁹		Old Fort
*Johnson, John Martin, Jr., Path ⁷⁰	1300—C/o Stanly Co. Hosp.	Albemarle
*Johnson, John Ralph, GP ³⁴	2380—Hotel Bldg.	Dunn
*Johnson, Joseph Lewis, GP ¹	6-3385—205 N. Main St.	Graham
Johnson, Julius Doar, OALR ¹⁷	9098—314 S. Washington St.	Shelby
Johnson, L. Meredith, T ³⁸	Blue Ridge Sanatorium	Charlottesville, Va.
*Johnson, Paul William, ObG & Endoc ²⁵	6233—824 Nissen Bldg.	Winston-Salem
Johnson, Walter Royle, GE & I ⁸	2-6641—408 Medical Bldg.	Asheville
Johnson, William Alexander, (Hon.) GP ⁶⁵	5134—224½ Scales St.	Reidsville
*Johnson, Wingate Memory, (Hon.) I ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem

*Present at 1955 meeting

†Deceased

*Johnston, Frank R., S ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Johnston, James W., ObG ¹	3621—1308 Rainey St., Kernodle Clinic	Burlington
*Johnston, George Browne, S ⁶²	6188—127 McArthur Street	Asheboro
Johnston, Wiley Warren, (Hon.) PH ⁵⁸	91—P.O. Box 175	Manteo
Johnston, William Oliver, I ⁵⁰	ED 2-7824—1520 E. Fourth St.	Charlotte 4
*Johnstone, Allan MacKenzie, GP ¹⁸	Lake Waccamaw 283-1—Box 22	Wanawish
*Jones, Beverly Nicholas, Sr., (Hon.) OALR ²⁵	2-4614—310 O'Hanlon Bldg.	Winston-Salem
Jones, Beverly Nicholas, Jr., I ²⁵	4-9441—504 O'Hanlon Bldg.	Winston-Salem
Jones, Carey Celester, (Hon.) GP ⁷⁵		Apex
Jones, Craig S., S ¹⁷	9055—Prof. Bldg.	Shelby
Jones, David P., N ²³	9031—Mason Farm Road	Chapel Hill
*Jones, Dean Cicero, S ³	4441—Ashe Co. Memo. Hosp.	Jefferson
Jones, Donnie Hue, Jr., GP ⁴¹	2171—P.O. Box 67	Princeton
Jones, Florentine Barker, Jr., OALR ³⁶	6906—Prof. Bldg., Box 246	Hendersonville
*Jones, Frank Woodson, S ¹³	630—Catawba Hosp.	Newton
Jones, Grace Germania, S ⁵⁰	ED 4-5106—1111 E. Morehead St.	Charlotte
Jones, J. Kempton, GP ²³	9-3931—227 E. Franklin St.	Chapel Hill
Jones, Joseph Reid, Jr., GP ²⁵	YuKon 3-9335—Box 298	King
Jones, Logan Oliver, I ⁵⁰	ED 4-9701—1320 Scott Ave.	Charlotte 3
Jones, Martin Evans, GP ¹¹	N. Main St.	Granite Falls
*Jones, Otis Hunter, ObG ⁵⁰	FR 5-7789—Doctors Bldg.	Charlotte
*Jones, Paul Erastus, I ¹⁰	4271—306 Prof. Bldg.	Kannapolis
Jones, Ransom J., PH ⁴⁴	2746—118 S. Queen St.	Kinston
*Jones, Thomas Thweatt, GP ²³	4-0941—604 W. Chapel Hill St.	Durham
Jones, Wm. McConnell, GP ²⁷	5-1961—213 W. Main St.	Gastonia
Jones, William Robert, T ⁷⁹	7-1121—Eastern N. C. Sanatorium	Wilson
Jones, William Samuel, GP ²⁴		Nashville
*Jordan, Charles Daniel, GP ⁶⁰	2301—Bethel Clinic	Bethel
Jordan, John Alfred, Jr., S ²⁰	3-0136—Highsmith Hosp.	Fayetteville
*Jordan, Riley Moore, GP ³⁸	2033—110 Campus Ave.	Raeford
Jordan, Weldon H., I ²⁰	3-3916—114 Broadfoot Ave.	Fayetteville
Jordan, William Pritchard, Pd ⁶	2361	Windsor
Joyce, Charles Weldon, GP ⁶⁵	200 Decateur St.	Madison
Joyner, George William, S ⁶²	127 McArthur St.	Asheboro
Joyner, Powell Winfred, GP ³³	Box 95	Enfield
Joyner, Theodore Harold, GP ³⁶	6485—419 Wall Street	Hendersonville
*Joyner, William Stafford, GP ²³	9-3931—227 E. Franklin St.	Chapel Hill
*Judd, Glenn Ballentine, GP ⁷⁵	47-R	Varina
Justa, Samuel Harry, GP ²⁴	2-2427—513 Sunset Ave.	Rocky Mount
Justice, William Shipp, S ⁸	7211—408 Medical Bldg.	Asheville
Justis, Homer R., U ⁵⁰	ED 4-6449—1012 Kings Drive	Charlotte
Kahn, Amelia Bauer, P ⁴⁶	172	Franklin
Kahn, Joseph William, GP ⁴⁶	269—Angle Hosp.	Franklin
*Kalevas, Harry John, GP ⁵⁰	ED 2-0316—217 Sedgfield Rd.	Charlotte
*Kapp, Constantine Hege, T ²⁵	7139—Forsyth Co. Sanatorium	Winston-Salem
*Kaufman, Karl Frederick, R ³⁶	6522—Pardee Mem. Hosp.	Hendersonville
*Kavanagh, William Paul, GP ⁶⁶	2331	Cooleemee
Kearse, William Oliver, GP ³⁵	2494—Box 232, Main Church St.	Canton
*Keathley, Franklin Burr, GP ¹¹	4-3451—109 S. Boundary St.	Lenoir
Keever, James Woodfin, GP ¹³	7616—9 Main Ave., S. W.	Hickory
Keiger, Oscar R., (Hon.) GP ²⁵		Winston-Salem
Keiter, William Eugene, Pd ⁴⁴	2040—400 Glenwood Ave.	Kinston
*Keith, Marion Yates, Pd ³²	2-1926—369 N. Elm St.	Greensboro
Keleher, Michael Francis, S ⁸	4-1811—303 City Hall Bldg.	Asheville
Keller, Guy Otis, S ⁵⁰	FR-6209-1—1012 Kings Drive	Charlotte
Keller, John Haney, GP ³⁷	2883—Box 71	Ahoskie
*Kelley, Thomas Francis, GP ⁷⁰	1237—120 W. North St., Box 749	Albemarle
Kelly, Luther Wrentmore, I ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte
Kelly, Luther W., Jr., Endoc ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte
*Kelly, Richard Sterling, Jr., Pd ²⁰	3-4141—1606 Morganton Rd.	Fayetteville
*Kelsey, Weston Maynard, Pd ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
*Kemp, Malcolm Drake, P ⁵³	61—Pinebluff Sanitarium	Pinebluff
Kempner, Walter, I ²³	9011—Box 3099, Duke Hosp.	Durham
Kendall, Benjamin Horton, C ¹⁷	8381—Shelby Med. Cen.	Shelby
*Kendall, John Harold, GP ⁶⁸	2161—707 College St.	Clinton
*Kendrick, Charles Mattox, I ¹¹	PL 4-9053—351 S. Mulberry St.	Lenoir
*Kennedy, John Pressly, (Hon.) S ⁵⁰	FR 6-2446—1012 Kings Drive	Charlotte 7
Kennedy, Leon Toland, I ⁵⁰	ED 4-9340—1340 Romany Road	Charlotte
Kerby, Grace P., I & D ²³	9011—Box 3328, Duke Hosp.	Durham
*Kermon, Louis Todd, I ⁵	6649—17 S. Boylan Ave.	Raleigh
*Kernodle, Charles E., Jr., S ¹	3621—Kernodle Clinic	Burlington
Kernodle, Dwight T., I ¹	3621—Kernodle Clinic	Burlington
Kernodle, George Wallace, Pd ¹	8341—321 W. Front St.	Burlington
*Kernodle, Harold B., Or ¹	3621—Kernodle Clinic	Burlington

*Present at 1955 meeting

*Kernodle, John Robert, ObG ¹	3621—Kernodle Clinic	Burlington
*Kerns, Thomas Cleveland, (Hon.) OALR ²³	2-2136—1110 W. Main St.	Durham
*Kerr, George R., Path ¹	4271—Alamance County Hosp.	Burlington
*Kerr, John Guthrie, GP ⁸	2131	Leicester
Kerr, Joseph T., S ⁷⁹	6135—103 N. Pine St.	Wilson
Kesler, Robert Cicero, OALR ³²	1018 N. Elm St.	Greensboro
Kester, John M., Jr., S ⁵⁰	FR 5-6628—1012 Kings Drive	Charlotte
Ketchie, James Meredith, (Hon.) GP ⁶⁶	93—Box 1354	Salisbury
Ketner, Fred Yaddin, GP ¹⁰	3221—57 N. Church St.	Concord
Keys, Carson M., GP ³	2401	West Jefferson
*Kibler, William Herbert, (HON) GP ⁹	126—Box 675	Morganton
Kidd, Ralph V., Jr., I ⁵⁰	FR 7-6272—1205 E. Morehead St.	Charlotte
Killian, Frank McClure, OALR ⁴⁶	58—Box 435	Franklin
Kimmelstiel, Paul, Path ⁵⁰	3-9201—Charlotte Memo. Hosp.	Charlotte
King, Duncan Ingraham Campbell, GP ³⁶	5331—113 Fifth Ave., W.	Hendersonville
King, Edward, (Hon.) Ret., Anes. ⁸	8901—H. Cedarchiff Road	Biltmore
King, Edward Sandling, Pd & Bact. ¹⁷	8411—314 S. Washington St.	Shelby
*King, Francis P., I ¹⁹	3474—509 Middle St.	New Bern
King, John Talbert, Pd ¹	8011—328 W. Davis St.	Burlington
*King, Robert Wilson, I ²⁰	3-0136—107 Bradford Ave.	Fayetteville
King, Walter Gorringer, S ³²	2-5021—Med. Arts Bldg.	Greensboro
Kingsley, William B., Path ²⁷	7221—Gaston Memo. Hosp.	Gastonia
*Kinlaw, J. Brady, GP ⁶⁴	5412—Box 126	Rowland
Kinlaw, Murray Carlyle, GP ⁶¹	6060—422 Chestnut St.	Lumberton
*Kirby, William Leslie, D ²⁵	4-9331—726 Nissen Bldg., 310 W. Fourth St.	Winston-Salem
Kirchberg, Roy William, GP ⁴⁰	138—Ferguson Bldg.	Sylva
Kirk, William Redin, (Hon.) I ³⁶	118 E. Fifth Ave.	Hendersonville
Kirksey, William Albert, GP ⁹	1767—302 S. King St.	Morganton
Kiser, Glenn Augustus, Pd ⁶⁶	1151—709 Barker St.	Salisbury
Kistler, Clark C., GP ⁷⁵	2-1641—502 St. Marys St.	Raleigh
Kitchen, Thurman D., (Hon.) Ed ⁷⁵	Wake Forest College	Wake Forest
*Kitchin, William Walton, S ⁶⁸	3232—Sampson Co. Hosp.	Clinton
Kleiman, David, I ⁷⁵	2-2551—2006 Fairview Rd.	Raleigh
Klenner, Fred Robert, GP ⁶⁵		Reidsville
Kling, Llewellyn Emil, PH ⁵	1309 N. Market St.	Washington
Klostermyer, Louis Leon, R ⁸	5674—611 Flatiron Bldg.	Asheville
Kneedler, Warren H., I ¹⁰	2-7046	Concord
*Knight, Floyd LaFayette, S ⁴³	4-7261—Box 891, 103 Hillcrest Dr.	Sanford
Knoefel, Arthur Eugene, Jr., GP ⁸	2782—114 Montreat Rd.	Black Mountain
Knowles, Daniel Lamont, (Hon.) GP ²⁴	6-8027—135 S. Main St.	Rocky Mount
Knox, Joseph Clyde, Pd ⁵⁴	7929—308 N. 11th St.	Wilmington
Knox, Richard Earl, GP ³³	7-3047—Box 668, Rosemary Med. Clinic	Roanoke Rapids
Kodack, Albert, GP ⁸	2-1131—808 City Bldg.	Asheville
*Koogler, Benjamin Robert, GP ⁵²	3311	Candor
Koon, Ethen Sease, Jr., S ⁸	3-2468—310 N. Med. Bldg.	Asheville
*Koonce, Donald Brock, S ⁵⁴	5828—408 N. 11th St.	Wilmington
Kornegay, Gray Bryan, GP ²²	5951—215 N. Railroad St.	Wallace
Kornegay, Lemuel Weyher, S ⁷⁶	291-1—Box 708	Warrenton
Kornegay, Robert Dumais, S ²⁴	144 Coast Line St., Box 111	Rocky Mount
*Kossove, Albert Anthony, I ⁵⁰	ED 3-8088—1530 Elizabeth Ave.	Charlotte
*Kossove, Irene Levy, I ⁵⁰	ED 3-8088—1530 Elizabeth Ave.	Charlotte
Koury, George Eli., I & A ¹	6-9300—1821 Hilton Rd.	Burlington
Koury, Marvella Vanney, Anes. ¹	6-9300—1821 Hilton Rd.	Burlington
*Kozeruba, George Michael, Pd ⁵⁴	3-2476—420 Orange St.	Wilmington
*Kramer, Morris, R ⁶²	5151—373 N. Fayetteville St.	Asheboro
Kraycirik, Emery Thomas, I ¹	6-5631—Box 1153, 443 S. Spring St.	Burlington
Kress, Esta Joyce Levy, Pd ²	410—15 Morven Road	Wadesboro
*Kress, Jacob Himi, GP ²	410—15 Morven Road	Wadesboro
Kroh, Laird Franklin, GP ⁵⁰	FR 6-0408—2201 McClintock Rd.	Charlotte
*Kunkle, Edward Charles, N & I ²³	9011—Duke Hosp.	Durham
Kyles, Norman Bruce, P ⁷⁷	State Hospital	Goldsboro
Kroncke, Fred George, I ³³		Roanoke Rapids
Kutteh, Hanna C., ObG ³⁹	8046—224 N. Center St.	Statesville
Lacy, George R., Jr., Path ⁸	5331—Memorial Mission Hosp.	Asheville
Lacy, Thomas Allen, P ⁹	1800—State Hospital	Morganton
Lafferty, John Ogden, R ⁵⁰	FR 5-1476—1012 Kings Dr.	Charlotte 7
Lafferty, John William, Pd ¹³	3163—12 Second Ave., N. E.	Hickory
Lahser, Charles Irvin, Pd ²⁷	8732—318 South St.	Gastonia
Lake, Ralph Callihan, S ³²	4-2429—902 N. Elm St.	Greensboro
*Lambeth, W. A., Jr., I ²⁵	8374—Nissen Bldg.	Winston-Salem
Lampley, Charles Gordon, ObG ¹⁷	8221—Box 64	Shelby
Lampley, William A., S ³⁶	9824—433 N. Church St.	Hendersonville
Lancaster, Newton Faris, GP ³⁵	GL 6-3031—Masonic Temple Bldg.	Waynesville
Landon, Henry C., III, GP ⁷⁸	800—821 B. Street	N. Wilkesboro

*Lane, Bessie Evans, I ⁷⁵	Caswell Training School	Kinston
*Lane, Edgar W., U ⁹	Ph. 1—222 W. Union St.	Morganton
Lane, James Monroe, GP ¹⁷	Box 829	Kings Mountain
Lane, John Loftin, (Hon.) OALR ²⁴	6-8051—Box 1059, 203 Tarboro St.	Rocky Mount
Lang, Andrew Martin, GP ⁹	1440—403 S. King St.	Morganton
Langdell, Robert D., Path ²³	1615 Amherst Road.	Hyattsville, Md.
Langdon, B. Bruce, U ²⁰	2-9524—903 Hay Street.	Fayetteville
*Langner, Fred W., I & P ⁵³	61—Pinebluff Sanitarium	Pinebluff
*Lanier, Verne Clifton, GP ²¹	14-2121—P.O. Box 75	Welcome
*Lapsley, Alberti Fraser, GP ⁷⁰	110—Badin Clinic	Badin
*Large, H. Lee, Jr., Path & CP ⁵⁰	ED 3-0141—Presbyterian Hospital	Charlotte
*Larkin, Ernest W., Jr., OALR ⁶⁰	4149—123 W. Third St.	Greenville
Lassiter, James Alexander, GP ³³	9-8981—108 Washington Ave.	Weldon
Lassiter, Vernon Clark, S & Ind ²⁵	2-0276—626 Reynolds Bldg.	Winston-Salem
Lassiter, Will Hardee, Jr., GP ⁴¹	3500	Smithfield
*Laton, James Franklin, (Hon.) OALR ⁷⁰	279—P.O. Box 147	Albemarle
LaTourette, K. A., Path ³⁶	6522—Pardee Mem. Hosp.	Hendersonville
Lattimore, Everett Beam, (Hon.) GP ¹⁷	9521—Box 217	Shelby
Lawrason, F. Douglas, ED & I ²³	9016—UNC Med. School	Chapel Hill
Lawrence, Patricia Ann, ObG ⁵⁰	ED 4-2616—1340 Romany Rd.	Charlotte
*Lawrence, Benjamin Jones, (Hon.) S ⁷⁵	2-2194—127 W. Hargett St.	Raleigh
Lawrence, Benjamin J., Jr., S ⁷⁵	503 Professional Bldg.	Raleigh
Lawson, George William, GP ¹	6-5552—105 W. Harden St.	Graham
*Leary, Deborah C., ObG ²³	9031—UNC Sch. of Med.	Chapel Hill
Leath, MacLean Bacon, OALR ³²	9605—529 N. Main St.	High Point
*LeBauer, Maurice Leon, S ³²	2-4571—101 N. Elm St.	Greensboro
*LeBauer, Sidney Ferring, I ³²	2-4571—101 N. Elm St.	Greensboro
*Lee, Allen Henry, GP ⁴¹	3251—N. Raiford St.	Selma
*Lee, F. Wayne, Or ⁵⁰	FR 6-2104—1012 Kings Drive	Charlotte
*Lee, Francis Brown, S ⁷³	AT 3-4324—107 E. Jefferson St.	Monroe
*Lee, J. Marshall, (Hon.) GP ⁶⁸	426	Newton Grove
Lee, Mike, GP ⁴⁴	108 E. Caswell St.	Kinston
Leeper, William Edward, I ²⁷	903 E. 2nd Ave.	Gastonia
LeGrand, Robert Hampton, S ³²	4-6393—1016 N. Elm St.	Greensboro
*Leinbach, Robert Frederic, (Hon.) I ⁵⁰	3-2528—1012 Kings Drive	Charlotte
*Lennon, Hershel Clanton, Path ³²	3-1970—338 N. Elm St.	Greensboro
Lenton, Charles T., Jr., GP ³⁶	Hendersonville 9596—Gen. Delivery	Horse Shoe
*Leonard, Jacob Calvin, Jr., OALR ²¹	3295—Box 566, 3½ E. First Ave.	Lexington
Leonard, Ruth, Oph ⁵⁰	ED 3-1131—106 W. 7th St.	Charlotte 2
Leonard, Walter Evan, GP ¹³	2298—130 27th St., S. W.	Hickory
Lewis, Clifford Whitfield, ObG ³²	5688—330 Locke St.	High Point
Lewis, John Sumter, S ¹³	Lutz Bldg., 105 1st Ave.	Hickory
Lewis, Martin T., GP ¹⁸	4111	Tabor City
Lewis, Robert Edward, S ⁷⁸	1145—Doctors Office Bldg.	N. Wilkesboro
Lewis, Sigma Van, GP ⁷⁵	4721	Garner
Lewis, Walter Glenn, GP ³²	2631—Box 32	Gibsonville
*Lide, Thomas Norwood, Path & CP ²⁵	4-4421—City Mem. Hospital	Winston-Salem
*Liles, George Welch, S ¹⁰	2-0246—208 Professional Bldg.	Kannapolis
Liles, Lonnie Carl, GP ⁷⁵	3-3914—707 Prof. Bldg.	Raleigh
*Lilly, William H., GP ³⁴	2137—Dunn Clinic	Dunn
Lindley, Joseph J., GP ¹⁴	669—112½ North Chatham St.	Siler City
Lindsay, Robert Boyd, GP ²³	9428—Univ. Infirmary	Chapel Hill
*Lindsey, Mark McDonald, S ⁶³	155—Hamlet Hosp.	Hamlet
*Link, M. Robert, ALR ⁵⁰	FR 5-1048—1012 Kings Drive	Charlotte
Little, Henry Reece, GP ¹⁹	2309—606 Pollock St.	New Bern
Little, Howard Q. L., GP ³²	2851—P.O. Box 205, Burlington St.	Gibsonville
Little, Joseph Rice, OALR ⁶⁶	886—P.O. Box 1277, Wallace Bldg.	Salisbury
Little, Lonnie Marcus, GP ³⁹	7661—113 W. Broad St.	Statesville
Little, Suzanne Brown, I & C ¹⁹	2309—606 Pollock St.	New Bern
Littlefield, James B., S ²³	Box 68, Univ. of Va. Hosp.	Charlottesville, Va.
Littlejohn, James Talmadge, I ⁸	2-3110—310 New Medical Bldg.	Asheville
Littlejohn, Thomas Willard, Ob ²⁵	509 O'Hanlon Bldg.	Winston-Salem
Littleton, Louisa Chandler, Pd ³⁹	4087—626 Salisbury Rd.	Statesville
Liverman, Henry J., GP ⁵	271—P.O. Box 5	Englehard
*Livingston, Everett Alexander, (Hon.) GP ⁶⁹	2301—Box K	Gibson
*Llewellyn, John Thomas, GP ⁴⁸	2186—Williamston Clinic	Williamston
*Lloyd, John Thomas, S ²⁶	5971—Franklin Memorial Hospital	Louisburg
Lock, Frank Ray, ObG ²⁵	3-5361—Bowman Gray School of Medicine	Winston-Salem
*Lockhart, David Armistead, Pd ¹⁰	4223—Ardsley Road	Concord
Logan, Frank, Jr., GP ⁶⁷	109½ W. Second St.	Rutherfordton
Logan, Frank William Hicks, (Hon.) GP ⁶⁷	4642—109½ W. Second St.	Rutherfordton
Lohr, Dermot, GP ²¹	2844—15 E. Center St.	Lexington
Lokey, Julian L., 44	Caswell Training School	Kinston
*Lomax, Donald H., GP ⁶⁶	5714—516 Mocksville Ave.	Salisbury
*Lombard, Elizabeth, GP ⁶⁶	Crescent 9355	Rockwell
*London, Arthur Hill, Jr., Pd ²³	6787—306 S. Gregson St.	Durham

*Present at 1955 meeting

Long, Benjamin L., GP ⁹		Glen Alpine
Long, David T., OALR ⁵⁹	6761—405 S. Main St.	Roxboro
Long, Frederick Yount, (Hon.) GP ¹³	2591—Box 36	Catawba
Long, Glenn, (Hon.) GP ¹³	18—Box 268	Newton
Long, Lester Lee, GP ³	4261—Box 4	W. Jefferson
Long, Rowland V., I ²¹	907—17 Randolph St.	Thomasville
Long, Thomas Walter, GP ¹³	492—Box 109	Newton
Long Van McKee, (Hon.) U & PH ²⁵	Res. 8839—1020 W. End Blvd.	Winston-Salem
Long, William Lunsford, Jr., I ⁷⁵	8224—2103 Clarke Ave.	Raleigh
*Long, William Matthews, GP ⁶⁶	180—S. Main St.	Mocksville
*Long, Zachary Filmore, GP ⁶³	4036—Box 605, 304 E. Washington St.	Rockingham
Lord, Margery Juline, (Hon.) PH ⁸	3-1611—Box 7525	Asheville
Lore, Ralph Eli, S ¹¹	PL 4-3651—324 S. Mulberry St.	Lenoir
Loring, William Ellsworth, Path ²³	9031—UNC School of Medicine	Chapel Hill
Lott, William Clifton, C ⁸	2-2041—815 Flatiron Bldg.	Asheville
Lovelace, Thomas Claude, (Hon.) GP ⁶⁷	Caroleen 4121—P.O. Box 295	Henrietta
*Lowell, William F., A ⁵⁰	ED 2-8589—207 Hawthorne Lane	Charlotte
Lovill, Robert Jones, (Hon.) GP ⁷¹		Mount Airy
Lowenbach, Hans, PN ²³	9011—Duke Hospital	Durham
Lowery, John Robert, (Hon.) GE ⁶⁶	65—510 W. Innes St.	Salisbury
*Lownes, Milton M., Jr., GP ⁷⁷	3177—N. Center St.	Mt. Olive
*Lubchenko, Nicholas E., GP ⁵⁰	Concord 2-3256	
	Charlotte FR 7-3835	Harrisburg
Lund, Herbert Z., Path ³²	4-0121—Moses Cone Hosp.	Greensboro
Lupton, Carroll Crescent, S ³²	2-6326—153 Bishop St.	Greensboro
Lupton, Emmett Stevenson, D ³²	4-4136—1018 N. Elm St.	Greensboro
Lurie, Allan Irwin, GP ³⁹	2-1100—905 N. Center St.	Statesville
Lutterloh, Issac Hayden, Sr., (Hon.) GP ¹³		Sanford
*Lutterloh, Hayden, Jr., GP ¹³		Sanford
Lutz, James Dwight, GP ³⁶	5225—600 Fifth Ave., W.	Hendersonville
Lyda, Edgar W., ObG ⁸	2-1568—10 Vanderbilt Place	Asheville
*Lyday, Charles Emmett, (Hon.) GP ²⁷	5-1522—304 Commercial Bldg., Box 1213	Gastonia
*Lyday, Russell Osborne, S ³²	2-0313—206 Jefferson Bldg.,	
	101 N. Elm St.	Greensboro
Lyday, Wilson, GP ⁷²	3-3201—232 S. Caldwell St.	Brevard
*Lymberis, Marvin Nicholas, Oph ⁵⁰	ED 3-1131—106 W. 7th St.	Charlotte
Lynch, James Madison, (Hon.) Ret. S ⁸		Fairview
Lynch, John Franklin, Jr., Pd ³²	6918—641 N. Main St.	High Point
*Lynn, Cy Kellie, GP ⁹	2152—Valdese Gen. Hosp.	Valdese
Lynn, James W., Jr., Pd ¹	8341—321 W. Front St.	Burlington
Lyon, Brockton Reynolds, (Hon.) S ³²	3-6911—342 N. Elm St.	Greensboro
MacAlpine, Orville Duncan, Pd ⁸	2-6844—1061 Haywood Rd., W.	Asheville
MacBrayer, Lewis Burgin, III, Pd ³⁹	3-2611—417 E. Statesville Ave.	Mooreville
MacDonald, J. Kingsley, ObG ⁵⁰	ED 4-2294—1524 Harding Place	Charlotte
MacKay, James Calvin, I ⁵¹	3-5182—201 N. Front Street	Wilmington
MacLauchlin, William Thompson, GP ¹³	800—Box 245	Conover
*MacRae, John Donald, R ²⁰	3-0136—815 Arsenal Ave.	Fayetteville
*McAdams, Charles Rupert, (Hon.) GP ²⁷	6524—14 N. Main Street	Belmont
*McAlister, Jean Colvin, PD ³²	2-4187—104 E. Northwood	Greensboro
*McAllister, Hugh Alexander, ObG ⁶¹	3256—Medical Arts Bldg.	Lumberton
McBee, Paul Thomas, S ⁴⁹	2194—Main & Railroad St.	Marion
McBryde, Angus Murdoch, Pd ²³	6-4531—809 W. Chapel Hill St.	Durham
McCain, Walkup Kennard, GP ³²	3601—P.O. Box 1248	High Point
McCall, William, Jr., I ²⁵	310 W. 4th St.	Winston-Salem
McCall, William Herbert, OALR ⁸	3-0421—601 City Bldg.	Asheville
*McCarty, Ralph Leeves, PR ⁵⁰	FR 6-5766—1515 Elizabeth Ave.	Charlotte
*McCauley, Elizabeth, Pd ⁷⁵	3-1117—226 Bryan Bldg.	Raleigh
McConnell, Harvey Russell, S ²⁷	5-2421—210 S. York Street	Gastonia
McCotter, St. Elmo, (Hon.) GP ⁵⁷	2312	Bayboro
*McCoy, Joseph B., Jr., ObG ⁵⁰	ED 2-8579—1505 Elizabeth Ave.	Charlotte
*McCracken, Joseph Pickett, I ²³	6-3151—516 Trust Bldg.	Durham
McCracken, Marvin Howell, GP ⁸	514 City Hall Bldg.	Asheville
†McCuiston, Allen Masten, (Hon.) GP ⁷⁷	2072—101 E. James St.	Mt. Olive
McCune, Frank Watt, GP ³⁶	5225—600 Fifth Ave., W.	Hendersonville
*McCune, William W., ObG ⁵⁰	FR 5-8628—1505 Elizabeth Ave.	Charlotte
*McCutchan, Frank, OALR ⁶⁶	331—102 W. Innes St.	Salisbury
McDade, Brodie Banks, (Hon.) GP ¹	Box 269	Burlington
*McDonald, Angus Morris, U ⁵⁰	ED 3-7101—700 Prof. Bldg., Box 1048	Charlotte
McDonald, Lester Bowman, I ³⁶	3271—726 Fifth Ave., W.	Hendersonville
*McDonald, Robert Lacy, GP ²¹	394—22 Trade St.	Thomasville
*McDowell, Harold Clyde, Or ²⁵	8533—1814 Nissen Bldg.	Winston-Salem
*McDowell, Roy Hendrix, GP ²⁷	Talmadge 5-8446—Main St.	Belmont
McDowell, William Kitchin, OALR ²⁴	2339—300 St. Patrick St.	Tarboro
McDuffie, Robert Stanley, ObG ⁸	8911—23 Flint Street	Asheville
*McDuffie, William Norman, (Hon.) GP ⁵³	3691	Robbins

*Present at 1953 meeting

†Deceased

*McEachern, Duncan Roland, S ⁵¹	4733—203 Murchison Bldg.	Wilmington
*McElrath, Percy John, ObG ⁷⁵	3-0015—500 St. Mary's St.	Raleigh
McElroy, James Lawrence, GP ⁴⁷	2381—Box AA	Marshall
McElwee, Ross S., Jr., S ⁵⁰	FR 6-8544—1012 Kings Drive	Charlotte
*McFadyen, Oscar Lee, Jr., I ²⁰	2-3302—123 Anderson St.	Fayetteville
McFarland, Irene McCain, GP ⁵³	6-9911—Box 174, Rt. 1	Columbia, S. C.
*McGavran, Edward G., PH ²³	8497—UNC School of Public Health	Chapel Hill
McGee, Julian Murrill, S ³²	2-0787—811 N. Elm St.	Greensboro
McGill, John C., GP ¹⁷	95—Battleground Ave.	Kings Mountain
McGill, Kenneth H., GP ¹⁷	767—Box 389	Kings Mountain
McGimsey, James F., Jr., I ⁹	1—222 W. Union St.	Morganton
McGowan, Claudius, (Hon.) GP ⁴⁸	2171—Box R	Plymouth
*McGowan, Joseph Francis, OALR ⁸	7323—29 N. Market St.	Asheville
*McGrath, Frank Bernard, GP ⁶⁴	3615—1808 N. Pine St.	Lumberton
McGuffin, William Christian, Pd ⁸	3-7364—180 Biltmore Ave.	Asheville
*McInnis, Alice Pugh, PD ⁷⁵	5893—502 St. Mary's St.	Raleigh
McIntosh, Archibald Nock, GP ⁴⁹	4211—219 S. Main St.	Marion
*McIntyre, Stephen, S ⁶⁴	3514—304 W. 23rd St.	Lumberton
McIver, Lynn, (Hon.) GP ⁴³	3-2441—Box 277	Sanford
McKay, Clinton Hull, I ⁵⁰	FR 6-3626—1322 Scott Ave.	Charlotte
McKay, Hamilton Witherspoon, (Hon.) U ⁵⁰	ED 4-6449—1012 Kings Drive	Charlotte
McKay, Robert Witherspoon, U ⁵⁰	ED 4-6449—1012 Kings Drive	Charlotte
McKay, William Peter, (Hon.) OALR ²⁰	3-0464—809 Arsenal Ave.	Fayetteville
McKee, John Sasser, Jr., Pd ⁹	Ph. 1800—State Hosp.	Morganton
*McKee, Lewis Middleton, GP ²³	6-5121—414 Trust Bldg.	Durham
McKenzie, Benjamin Whitehead, (Hon.) S ⁶⁶	4389—709 Barker St.	Salisbury
McKenzie, Wayland Nash, GP ⁷⁰	370—320 N. Second St., Hill Bldg.	Albemarle
*McKinnon, William James, S ²	14—Anson Sanatorium	Wadesboro
*McKnight, Roy Bowman, S ⁵⁰	ED 3-6524—403 N. Tryon St.	Charlotte
McLamb, George Thomas, GP ¹	3-3161—112 Clay St.	Mebane
McLaughlin, Calvin Sturgis, Jr., Ind ⁵⁰	USTVA Medical Center John Sever Steam Plant	Rogersville, Tenn.
McLaurin, Daniel Archie, GP ⁷¹	992	Dobson
*McLean, Augustus A., GP ³⁷	3911—Box 5065	Murfreesboro
McLean, Ewen Kenneth, Pd ⁵⁰	ED 4-3031—1361 E. Morehead St.	Charlotte
McLean, Harry Herndon, III, GP ³³	2581—416 Roanoke Ave.	Roanoke Rapids
*McLean, James Wilton, I ²⁰	2-6278—115 Bow St.	Fayetteville
McLellard, William Davies, (Hon.) S ³⁹	3-5611—Lowrance Hospital	Mooreville
McLemore, George A., (Hon.) GP ⁴¹	Box 120	Smithfield
McLemore, George Ammie, Jr., I ⁴¹	721 Huntington Ave.	Boston 15, Mass.
McLendon, Walter Jones, GP ⁷⁰	361—Box 116	Oakboro
McLeod, John C., Jr., I ⁷⁷	2410—811 Simmons St.	Goldsboro
*McLeod, John Purl Utley, GP ⁷³	2—McLeod Clinic	Marshville
McLeod, Junius Hazel, GP ²⁰		Fayetteville
*McLeod, Mary Margaret, Pd ⁴³	4-2351—114 S. Gulf St.	Sanford
*McLeod, Vida Canada, GP ⁵³	2-5581—Box 775	Southern Pines
*McLeod, William Leslie, ObG ⁵⁰	FR-6-1554—1524 Elizabeth Ave.	Charlotte
*McLeod, William Louis, GP ⁷⁰	47—Main St.	Norwood
McManus, Hugh Forrest, GP ⁵⁰	V15-1541—Box 115	Matthews
*McManus, Hugh Forrest, Jr., GP ⁷⁵	6510—722 St. Mary's St.	Raleigh
McMillan, Robert Lindsay, C ²⁵	4-6361—Bowman Gray School of Medicine.	Winston-Salem
McMillan, Robert Monroe, I ⁵³	2-6471—140 S. W. Broad St.	Southern Pines
*McMillan, Roscoe Drake, (Hon.) GP ⁶⁴	2201—Box 232	Red Springs
McMurray, Clarence M., I ¹⁷	2-1483—Box 1051	Shelby
*McMurry, Avery Willis, S ¹⁷	6671—Professional Bldg.	Shelby
McNairy, Margaret Caroline, (Hon.) Ob ¹¹	125 W. Harper Ave.	Lenoir
*McNeill, Claude Ackle, Jr., GP ⁷¹	520—121 Church St.	Elkin
McNeill, James Hubert, I ⁷⁸	351—Box 481, 408 8th St.	N. Wilkesboro
McNiel, Thomas Lee, GP ⁷⁸	1325—Eighth St.	N. Wilkesboro
McPheeters, Samuel Brown, PH ⁷⁷	4380—Health Center	Goldsboro
*McPherson, Charles Wade, (Hon.) OALR ¹	6-0622—323 W. Front St.	Burlington
McPherson, Samuel D., Jr., Oph ²³	McPherson Hosp.	Durham
McRae, Marvin Everett, D ³²	3-6911—342 N. Elm St.	Greensboro
McWhorter, Robert L., I ¹⁰	5141—194 Lake Concord Rd.	Concord
Mabe, Henderson David, Jr., GP ³⁴		Erwin
Macatee, George, Jr., ObG ⁸	2-6881—200 Charlotte St.	Asheville
*Mackie, George Carlyle, GP ⁷⁵	5241—340 N. Main St.	Wake Forest
Maddrey, Milner Crocker, S ³³	7-3660—643 Roanoke Avenue	Roanoke Rapids
Major, Richard Smart, ALR ³⁶	4142—Commercial Bldg.	Hendersonville
*Maness, Archibald Kelly, Ob ³²	8214—1305 N. Elm St.	Greensboro
*Maness, Paul Franklin, Pd ¹	8341—321 W. Front St.	Burlington
Mangum, Carlyle Thomas, Jr., GP ⁶⁵	Main 3-2438—Washington St.	Leaksville
Mangus, Julian Edward, GP ⁶⁵	909—533 Morgan St.	Spray
Mankin, James Wallace, I ⁴⁵	3010 Country Club Rd.	Winston-Salem
*Manly, Isaac, S ⁷⁵	4-6812—2021 Clark Avenue	Raleigh

*Present at 1955 meeting

*Manly, James H., Jr., S ²³	9031—N. C. Mem. Hosp.	Chapel Hill
*Manning, Isaac Hall, Jr., I ²³	4-7951—417 Trust Bldg.	Durham
Markham, Blackwell, (Hon.) S ²³	5-3441—123 W. Main St.	Durham
*Marks, Edgar S., I ³²	4-6727—1305 N. Elm St.	Greensboro
Marlowe, William Anderson, (Hon.) GP ³¹	P.O. Box 426	Walstonburg
*Marr, James Tilden, R ²⁵	4-9231—726 Nissen Bldg.	Winston-Salem
*Marr, Myron Whitmore, (Hon.) I ⁵³	3291—Carolina Bldg.	Pinehurst
Marsh, Frank Baker, (Hon.) I ⁶⁶	291—713 Barker St.	Salisbury
Marshburn, Elisha Thomas, Jr., I ⁵⁴	3-5182—201 N. Front Street	Wilmington
*Marshall, James Flournoy, S ²⁵	2-1482—310 W. 4th St.	Winston-Salem
Martin, Benjamin Franklin, I ²⁵	418 Nissen Bldg.	Winston-Salem
Martin, James Alfred, (Hon.) Pd ⁶⁴	4712—Box 715	Lumberton
*Martin, James F., R ²⁵	4-6361—N. C. Baptist Hosp.	Winston-Salem
*Martin, John Floyd, (Hon.) OALR ³⁴	2470—Box 186, 100 E. Broad St.	Dunn
Martin, Lester Poindexter, (Hon.) OALR ²⁵	201—Box 512, Court Square	Mocksville
*Martin, Moir Saunders, (Hon.) S ⁷¹	406—Martin Mem. Hosp., Cherry St.	Mt. Airy
Martin, Ruth Campbell, Anes ²³	9011—Duke Hosp.	Durham
Martin, Samuel P., I ²³	9011—Duke Hosp.	Durham
Martin, Thomas Adrian, Oph ⁷⁵	5131—2811 Hillsboro St.	Raleigh
*Martin, William Francis, (Hon.) S ⁵⁰	ED 2-5728—608 Prof. Bldg.	Charlotte
Martin, William James, GP ⁷⁵	3-7078—815 Newbern Ave.	Raleigh
Masland, Richard L., N ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Mason, Lockert Bemiss, S ⁵⁴	2-1533—1007 Murchison Building	Wilmington
Mason, Manly, (Hon.) GP ¹²	2186—P.O. Box 23	Newport
Massey, Charles Caswell, (Hon.) Pr ⁵⁰	ED 2-6622—403 Tryon St.	Charlotte
Matheson, Joseph Gaddy, OALR ³⁷	3057—Box 352	Ahoskie
*Matheson, Robert Arthur, GP ³⁸	353—Box 215	Raeford
*Mathews, Robert William, I ³²	232 Jefferson Bldg.	Greensboro
*Mathieson, Kenneth Marlin, GP ¹⁴	2411—17 West St., Box 985	Pittsboro
Matros, Nathaniel Hamilton, S ⁸	2-1568—10 Vanderbilt Place	Asheville
*Matthews, George P., GP ²²	2256	Rose Hill
*Matthews, Hugh Archie, GP ³⁵	2921—44 Academy St., Box 72	Canton
*Matthews, Otto S., GP ²²	317—P.O. Box 26	Warsaw
Matthews, Roland D., GP ²⁵	2649—Bailey Coble Bldg.	Burlington
*Matthews, Wallace Russell, Pd ⁸	3-1131—5 Ravenscroft Dr.	Asheville
*Matthews, William Camp, I ⁵⁰	ED 3-8661—217 Travis Ave.	Charlotte
Matthews, William W., (Hon.) GP ⁶⁵	3-2652—Box M.	Leaksville
Maulden, Paul Ranzo, S ¹⁰	2-9611—206 Prof. Bldg.	Kannapolis
*Mauroner, Norman L., GP ²³	2991—Box 446	Hillsboro
*Mauzy, Charles Hampton, Jr., ObG ²⁵	3-5361—Bowman Gray School of Medicine	Winston-Salem
Maxwell, Clarence Schuyler, (Hon.) I ¹²	2-4461—509 Front Street	Beaufort
*May, Harvey Craig, ObG ⁵⁰	6-1554—1524 Elizabeth Ave.	Charlotte
*May, William Joseph, GP ²⁵	4-8641—334 Nissen Bldg.	Winston-Salem
Maybin, Richard M., GP ¹⁷	2331—Drawer M.	Lawndale
Mayer, Walter Brem, I ⁵⁰	Edison 4-5531—412 N. Church St.	Charlotte 2
Maynard, Eugene V., GP ⁵	6751—230½ E. Main St.	Belhaven
Mayo, Joseph Dixon, Jr., GP ⁷⁴	7317—323 Chestnut St.	Henderson
Meade, Forest Chauncey, S ²¹	2487—27 E. Center St.	Lexington
Meadows, Joseph Herman, OALR ⁷⁹	6096—201 National Bank Bldg.	Wilson
Meads, Manson, I ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Means, Robert L., S ²⁵	712 O'Hanlon Bldg.	Winston-Salem
Mears, George Augustus, S ⁸	Ph. 7131—46 Haywood St.	Asheville
Mease, Willis Eugene, GP ⁵⁶	2181—Box 327	Richlands
Mebane, John G., I ⁶⁷	3364—Rutherford Hosp.	Rutherfordton
Mebane, William Carter, Jr., S ⁵⁴	3-1614—Bulluck Hosp. Clinic	Wilmington
Medlin, Charles T., GP ²⁵	WO 9-3375—Box 267	Rural Hall
Medlin, Jasper R., GP ⁶²	2260—533 S. Fayetteville St.	Asheboro
Mees, Theodore H., I ⁶⁴	6611—27th & Rowland Ave.	Lumberton
*Melchior, George W., ObG ⁷⁹	7-0169—Melchior Clinic, 400 W. Nash St.	Wilson
Melchior, Josephine Trevett, Pd ⁷⁹	7-0169—400 W. Nash St.	Wilson
Menefee, Elijah Eugene, Jr., I & T ²³	9011—Duke Hosp.	Durham
*Menzies, Henry Harding, ObG ²⁵	3-6771—101 S. Cherry St.	Winston-Salem
Meritt, Joseph E., Jr., I ⁷⁵	6307—615 St. Mary's St.	Raleigh
Meriwether, Benjamin Morsell, (Hon.) S ⁸	7071—Med. Bldg.	Asheville
Merritt, F. L., GP ⁴⁸	2051—Columbia Hosp.	Columbia
Merritt, Jesse Frederic, I ³²	3-7018—342 N. Elm St.	Greensboro
Messerschmidt, H. Carl, Jr., I ³²	3774—330 Locke St.	High Point
*Mewborn, John Moses, GP ⁶⁰	3804—114 W. Church St.	Farmville
Metcalf, Lawrence E., Pd ⁸	7171—503 City Bldg.	Asheville
Meyer, George J., GP ³²	High Point 3059—Box 203	Archdale
Michal, Mary Barrows Harris, PH ³⁵	Amherst 4-8466—P.O. Box 528, Court House Annex	Boone
Miles, Walter W., GP ⁷⁸	Route 1	Wilkesboro

*Present at 1955 meeting

*Milham, Claude Gilbert, R ⁶³	8—Milham Clinic, 115 Main St.	Hamlet
Millender, Charles White, (Hon.) S ⁸	2-6941—230 Pearson Dr.	Asheville
Miller, Cameron Eugene, GP ³	4746	Jefferson
*Miller, George R., Or ²⁷	7210—412 Realty Bldg.	Gastonia
Miller, Harry, GP ¹⁵	Box 146	Murphy
Miller, Henry C., Jr., I ³⁵	Bowman Gray Sch. of Med.	Winston-Salem
Miller, Henry Rankin, GP ⁸	4321—Box 967, State Street	Black Mountain
*Miller, Horace, GP ²⁰	2-3780—6 Market Square	Fayetteville
Miller, Ira Ben, I ³²	3423—517 N. Main St.	High Point
Miller, Lloyd Davis, GP ¹⁹	3351—Tainter Bldg.	Marion
Miller, Oscar Lee, (Hon.) Or ⁵⁰	FR 6-5686—123 W. 7th St.	Charlotte
*Miller, Robert Carlisle, (Hon.) A & D ²⁷	414 Harvie St.	Gastonia
Miller, Robert P., S ⁵⁰	FR 51349—1425 Elizabeth Ave.	Charlotte
Miller, Walton H., Jr., S ⁷⁷	900—816 E. Ash St.	Goldsboro
Miller, Warren Edwin, S ¹⁸	2336—7 N. Thompson St.	Whiteville
*Milliken, James Shepard, (Hon.) I ⁵³	2-6411—105 E. Penn. Ave.	Southern Pines
Millman, Theodore Harris, GP ⁶⁵	MA 3-6404—P.O. Box 156	Spray
Millns, Dale Thomas, U ¹⁹	5256—Clark Bldg., Box 1069	New Bern
Mills, Charles Rose, Oph ³²	3-8195—114 Jefferson Bldg., Box 1861	Greensboro
*Mills, Georgia V., PH ⁷	Box 247	Elizabethtown
Mills, Hugh Harrison, I ⁶⁷	3379—Box 262	Forest City
Mills, James Cobb, GP ⁷⁸	601—314 C. at Fourth St.	N. Wilkesboro
Mills, Randolph Dennis, GP ⁷⁴	5114—206 S. Garnett St.	Henderson
Mills, Wardell Hardee, OALR ³²	2-4724—201 Banner Bldg.	Greensboro
Minges, Ray D., S ⁶⁰	5114—Box 6B, Rt. 1	Greenville
Mitchell, George William, (Hon.) GP ⁷⁹	3179—First National Bank Bldg.	Wilson
Mitchell, Landis Patterson, GP ⁶⁷	4221—103 Wilson St.	Spindale
Mitchell, Paul Hayne, (Hon.) GP ³⁷	2397—Box 5	Ahoskie
Mitchell, Roy Colonel, (Hon.) I ⁷¹		Mt. Airy
Mitchell, Thomas Brice, GP ¹⁷		Shelby
Mitchell, William E., GP ⁴⁰	2755—Box 536	Bryson City
Mitchell, Zack Perry, (Hon.) PH ¹⁷	5941—Box 138, Cleveland Co. Health Dept.	Shelby
*Mitchener, Calvin C., D ⁵⁰	6-1523—207 Hawthorne Lane	Charlotte
*Mock, Charles Glenn, Path ⁶⁶	Bowman Gray School of Medicine	Winston-Salem
Mock, David Carlton, GP ²¹	RFD 3	Lexington
*Mock, Frank Lowe, (Hon.) GP ²¹	13-2084—Box 120, Route 3	Lexington
Moffett, Alexander Stuart, S ³⁹	2212—Alexander Co. Mem. Hosp.	Taylorsville
*Monk, Henry Lawrence, (Hon.) GP ⁶⁶	Wallace Bldg.	Salisbury
*Monroe, Clement Rosenburg, S ⁵³	5611—Moore County Hosp.	Pinehurst
Monroe, Daniel Geddie, GP ²⁰	2-5882—104 Highland Ave., Box 3235	Fayetteville
*Monroe, Lance Truman, ObG ¹⁰	4216—Woman's Clinic, Ardsley Road	Concord
*Montgomery, John Christian, Anes. ⁵⁰	ED 3-9201—1400 Scott Ave.	Charlotte
Moody, W. A., GP ⁶⁰	230-1—Bethel Clinic	Bethel
Moore, Burmah Dixon, (Hon.) GP ²⁷	4-M	Mt. Holly
*Moore, D. Forrest, ObG ¹⁷	8221—216 S. Washington St.	Shelby
Moore, Davis Lee, GP ⁶⁰	2707—525 Evans St., Box 931	Greenville
Moore, Donald Bain, (Hon.) Ind ⁷⁰	50—Carolina Aluminum Co.	Badin
*Moore, Edward Eugene, Oph ⁸	3-8761—706 Flatiron Bldg.	Asheville
*Moore, Horace G., Jr., S ⁵⁴	3-6358—1010 Grace St.	Wilmington
*Moore, James L., Or ⁷⁵	4-3403—821 Hillsboro St.	Raleigh
Moore, John Andrew, ³²	342 N. Elm St.	Greensboro
*Moore, Julian Alison, (Hon.) S ⁸	2-6361—20 Battery Park Ave.	Asheville
*Moore, Kinchen Carl, (Hon.) PH ⁶⁹	456—Scotland Co. Health Dept.	Laurinburg
Moore, Laurie Walker, GP ¹²		Beaufort
Moore, Pierce Jones, Jr., GP ³⁶	Arden 2341—Mountain Sanitarium & Hospital	Fletcher
*Moore, Robert Alexander, (Hon.) Or ²⁵	2-2234—Bowman Gray School of Medicine	Winston-Salem
*Moore, Robert Ashe, (Hon.) Pd ⁵⁰	ED 2-4167—1505 Elizabeth Ave.	Charlotte
Moore, Robert Love, GP ²⁷	E. Pa. Ave.	Bessemer City
Moore, Roy Hardin, GP ³⁵	2478—Medical Bldg.	Canton
Moore, William Donald, GP ³⁴	2613	Coats
*Moorefield, Robert Hovle, GP ¹⁰	5696—Box 931	Kannapolis
Mordecai, Alfred, PH ⁷⁸	347—Wilkes Co. Health Center	Wilkesboro
*Morehead, Robert Page, Path & ED ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Morey, Madeline E., PH ⁷⁵	69 W. Wash. St.	Chicago 2, Ill.
Morey, Milton B., GP ¹²	6-4232—1109 Arendell St.	Morehead City
Morgan, Arthur E., R ²⁰	3-3151—234 Ray Ave.	Fayetteville
Morgan, Benjamin Edward, T ⁷⁹	7-1121—Eastern N. C. Sanatorium	Wilson
*Morgan, Burnice Earl, (Hon.) GP ⁸	2-1585—304 Medical Bldg.	Asheville
Morgan, Charles Hermann, S ²⁷	9471—318 South St.	Gastonia
Morgan, Grady Alexander, GP ⁸	7611—Court House	Asheville
Morgan, Ralph Siler, I ⁴⁰	261—Ferguson Bldg.	Sylva
Morgan, Richard Young, I ²¹	3394—21 E. Center St.	Lexington
*Morgan, William Gardner, Ed & GP ²³	9428—UNC Infirmary	Chapel Hill

*Moricle, Charles Hunter, S ⁶⁵	4024—117½ Gilmer St.	Reidsville
Morris, Donald S., Path & CP ²⁵	4-4421—City Mem. Hosp.	Winston-Salem
*Morris, John Watson, S ¹²	6-4437—900 Shepard St.	Morehead City
†Morris, Joseph A., (HON) GP ³⁰	1209 Dwir Place	Durham
*Morris, Leslie Morgan, R ²⁷	5-0071—Med. Bldg.	Gastonia
Morris, Marshall, T ³⁸	Kenmore 6-9200—Mass. Memorial Hospital	Boston 18, Mass.
*Morris, Rae Henderson, S ¹⁰	Box 323	Concord
Morrison, James Rudy, GP ³⁹	7451—153 E. Broad St., Box 749	Statesville
Morrison, Robert H., ObG ²⁰	2-8500—1256 Ft. Bragg Rd.	Fayetteville
Morrison, Roger William, Path & CP ⁸	4-1070—65 Sunset Parkway	Asheville
Morton, L. Thomas, OALR ⁴⁵	RE. 5-7421—816 S. Aspen St.	Lincolnton
Moseley, Zebulon Vance, (Hon.) GP ⁴⁴	4302—202 E. Gordon St.	Kinston
*Moss, George Oren, PH ⁶⁷	4931—Rutherford Health Center	Rutherfordton
Motley, Fred Elliot, ALR ⁵⁰	3-1131—106 W. 7th St.	Charlotte
Mucci, Lawrence A., R ⁸	2-6442—247 Charlotte St., Med. Arts Bldg.	Asheville
Mudgett, William Chase, (Hon.) I ⁵³	P.O. Box 867	Southern Pines
Mullen, Malcolm Preston, I ⁹	Ph. 1800—State Hosp., Box 125	Morganton
Muller, John Crawford, I ²³	710 A Pendleton St.	Greenville, S. C.
Mumford, Ander Morgan, GP ⁶⁰	4494	Winterville
Munday, Perry Ligon, OALR ³⁹	2-1139—130 N. Tradd St.	Statesville
Mundorf, George, PN ⁵⁰	FR 5-5634—111 E. Morehead St.	Charlotte
*Munroe, Colin A., I & GE ⁵⁰	Duke Hosp.	Durham
Munroe, Henry Stokes, Sr., (HON) S ⁵⁰	ED 2-0325—301 Prof. Bldg.	Charlotte
†Munson, Frederick T., OALR ³²	4604 Winston Rd.	Greensboro
Munt, Herbert Frederick, (Hon.) Or ²⁵	814 Carolina Avenue	Winston-Salem
Murchison, David Reid, (Hon.) I ⁵¹	4262—17 N. Front St.	Wilmington
Murdaugh, Herschel Victor, I ²³	9011—Box 3322 Duke Hosp.	Durham
*Murdoch, James Wilson, P ³⁰	Creedmoor 2211—State Hosp.	Butner
*Murphy, Gibbons Westbrook, R ⁸	5674—611 Flatiron Bldg.	Asheville
*Murphy, Robert Jennings, Jr., Pd ²³	3841—P.O. Box 709	Hillsboro
Murphy, Thomas Lynch, I & GE ⁶⁶	4699—116 Rutherford St.	Salisbury
*Murray, Harold Lafayette, GP ⁷⁰	1606—N. 2nd Street, Box 127	Albemarle
Murray, Robert G., Oph ²³	9031—N. C. Memorial Hosp.	Chapel Hill
*Murray, Robert Lebby, (Hon.) GP ³⁸	532—Box 216	Raeford
Murray, William Gray, I ³²	5-4365—153 Bishop St.	Greensboro
Myers, Jack D., I&C ²³	9011—Duke Hosp.	Durham
Myers, Richard Thomas, S ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Nailling, Richard Cabot, S ⁸	8621—32 Wall St.	Asheville
*Nance, Charles Lee, (HON) GP ⁵⁰	ED 3-7838—410 Prof. Bldg.	Charlotte 2
*Nance, John Wesley, GP ⁶⁸	3361—120½ Main St.	Clinton
Nanzetta, Leonard, Anes ²⁵	4-4421—City Memo. Hosp.	Winston-Salem
*Nash, John Frederick, (HON) GP ⁶¹	2661—227 W. Broad St.	St. Pauls
Nash, Thomas Palmer, III, S ⁵⁸	4890—Medical Bldg.	Elizabeth City
*Naumoff, Philip, GP ⁵⁰	ED 4-5646—1012 Kings Drive	Charlotte 7
Neal, J. Walter, S ⁷⁵	8331—309 Hillsboro St.	Raleigh
Neal, Kemp Prather, (Hon.) Ret. S ⁷⁵	Box 1231	Myrtle Beach, S. C.
*Neal, Rutherford Douglas, S ⁵⁰	FR 6-7471—1012 Kings Drive	Charlotte
Neblett, Herbert Clarence, Oph ⁵⁰	ED 3-5852—1012 Kings Drive	Charlotte 7
Neese, Kenneth Earle, GP ⁷³	599—101 S. Haynes St.	Monroe
*Nelson, William Howell, GP ⁶⁸	3366—Cooper Dr.	Clinton
*Nesmith, Louis Edward, GP ⁶⁹	6—Main St.	Laurinburg
Netsky, Martin G., NP ²⁵	Bowman Gray Sch. of Medicine	Winston-Salem
Neville, Cecil Howell, GP ³³	4601—Box 158	Scotland Neck
Newcomb, Andrew Purefoy, Jr., GP ⁷⁴	3512—232 Orange St.	Henderson
Newell, E. T., GP ⁷¹	992	Dobson
Newell, Hodge Albert, (Hon.) OALR ⁷⁴	5645—Box 732	Henderson
Newell, Josephine Evelyn, GP ⁷⁹	3071—Box 208	Bailey
Newell, Leon Burns, (HON) GP ⁵⁰	ED 2-6212—1006 Independence Bldg.	Charlotte
Newland, Charles Logan, GP ⁷²	Turner 33-811—30 W. Jordan St.	Brevard
*Newman, Glenn Carraway, I ⁶⁸	2344—113 Fayetteville St.	Clinton
Newman, Harold Hastings, Jr. GP ⁶⁶	3939—Box 264, Wallace Bldg.	Salisbury
Newsome, Henry Clay, GP ⁷¹	141—Main St.	Pilot Mountain
*Newton, Howard Lowell, (Hon.) GP ⁵⁰	ED 2-8915—403 N. Tryon St.	Charlotte
Newton, William King, OALR ⁷⁸	179—Box 191	N. Wilkesboro
Nicholas, Austin Flint, (Hon.) GP ⁵⁹	2552—Box 498, Academy St.	Roxboro
Nichols, Rhodes Edmond, Jr., I ³³	5-2201—306 S. Gregson St.	Durham
Nichols, Robert J., R ²⁵	4-4421—City Memo. Hosp.	Winston-Salem
*Nichols, Thomas Rogers, I ⁹	609—206 N. Sterling St.	Morganton
Nicholson, John Harvey, II, I ³⁹	7253—The Goode Clinic, Hartness Rd.	Statesville
Nicholson, Neal Graham, Jr., OALR ⁶³	2926—216 E. Washington St.	Rockingham
Nicholson, Neill Graham, Sr., (Hon.) OALR ⁶³	Box 505	Rockingham
*Nicholson, William McNeal, I ²³	9011—Duke Hosp.	Durham

*Present at 1955 meeting

†Deceased

*Nicol, William Frederick, GP ³³	5571—Box 637	Carthage
Nifong, Frank M., GP ²⁵	8876	Clemmons
Nisbet, Douglas Heath, (Hon.) Ret., GE ⁵⁰	6006—903 W. Road	Kinston
Noble, Robert Primrose, (Hon.) R ⁷⁵	9748—518 Prof. Bldg.	Raleigh
Noblin, Frances E., T ⁷⁹	7-1121—Eastern Carolina Sanatorium	Wilson
Noblin, Roy Lee, (Hon.) S ³⁰	3561—Box 1191, Main St.	Oxford
Noel, George Thompson, Oph ¹⁰	2-9226—204 Cabarrus Bank Bldg.	Kannapolis
Noel, William Walker, S ⁷⁴	4215—309 Wyche Street, Box 37	Henderson
Noell, Robert Holman, (Hon.) Ind ²⁴	6-6166—1320 S. Church St.	Rocky Mount
Nolan, James Onslow, (Hon.) GP ¹⁰	209 Prof. Bldg.	Kannapolis
Nolan, Paul Vernon, GP ¹⁷	Box 829	Kings Mountain
Norburn, Charles Strickland, (Hon.) S ⁸	2-6204—9 Biltmore Plaza, Biltmore Station	Asheville
Norburn, Russell Lee, S & Ind ⁸	2-6204—9 Biltmore Plaza	Asheville
*Norfleet, Charles Millner, Jr., U ²⁵	2-2943—Bowman Gray School of Medicine	Winston-Salem
Norfleet, Edgar Powell, (HON) GP ⁶	286—Box 176	Roxobel
Norment, William Blount, S ³²	3-4445—101 N. Elm St.	Greensboro
Norris, Charles Bradley, I ⁵⁰	ED 4-0450—1508 E. 4th St.	Charlotte
Norris, Francis Loran, GP ²²	2761	Beulaville
*North, Ellsworth Howard, Jr., GP ⁵⁸	5416—1502 Carolina Ave.	Elizabeth City
*Northington, James Montgomery, (HON) I ⁵⁰	FR 6-9951—2148 Malvern Rd.	Charlotte 7
*Norton, John W. Roy, PH ⁷⁵	4-3611—N. C. State Bd. of Health	Raleigh
Norville, William Larkin PH ¹	321 Trade St.	Burlington
Nowell, James S., GP ²⁶		Franklinton
Nowlan, Fagg Bernard, GP ³²	Greensboro 3-0238—Box 205	Pleasant Garden
Nowlin, George Preston, U ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte
Nunnery, William Ernest, U ⁸	2-6464—807 Public Serv. Bldg.	Asheville
O'Briant, Albert Lee, (Hon.) GP ³⁸	495—P.O. Box 245	Raeford
Odom, Guy L., NS ²³	9011—Duke Hosp.	Durham
Odom, Robert E., Oph ⁸	9891—331 Haywood Bldg.	Asheville
Oehlbeck, Luther W. F., R ⁹	3869—18 Thirteenth Ave., N. E.	Hickory
*Oelrich, August M., S ⁴³	4-7261—103 Hillcrest Dr.	Sanford
Offutt, Vernon Delmus, I & C ⁴⁴	3751—400 Glenwood Ave., Kinston Clinic	Kinston
Ogburn, Herbert Hammond, (Hon.) S ³²	2-5214—222 Jefferson Bldg.	Greensboro
Ogburn, L. N., Pr ⁷⁵	5387—116 Woodburn Rd.	Raleigh
*Ogburn, Lundie Calvin, G ²⁵	8420—105 West 4th St.	Winston-Salem
Ogilvie, Walter Ellsworth, III, I ⁸	4-1062—394 Merrimon Ave.	Asheville
*Oleen, George G., GP ⁷³	AT 3-6622—214 N. Main St.	Monroe
Oliver, Adlai Stevenson, (Hon.) ObG ⁷⁵	2-0054—423 Daniels St.	Raleigh
*Oliver, James E., GP ⁴⁰	4105—P.O. Box 697	Bryson City
*Oliver, Jim Upton, ObG ⁷⁵	3-6424—423 Daniels St.	Raleigh
Oliver, Joseph Andrew, GP ⁶⁶	Crescent 9355—P.O. Box 458	Rockwell
Oliver, Robert Deleon, OALR ⁴¹	3055	Selma
Olson, Robert M., OALR ⁴¹	3611—P.O. Box 126	Kenly
*O'Neal, Ruth, Pd ²⁵	4-7831—215 Reynolds Bldg.	Winston-Salem
*Ordway, Nelson Kneeland, Pd ²³	9031—N. C. Mem. Hosp.	Chapel Hill
Orgain, Edward Stewart, C & I ²³	9011—Duke Hosp.	Durham
*Ormand, John William, OALR ⁷³	AT 3-2812—Box 397, 116 N. Main St.	Monroe
Ormond, Allison Lee, GP & T ¹³	2-7516—202 A Union Square	Hickory
*Orr, Charles Collins, (HON) I & T ⁸	5921—29 N. Market St.	Asheville
Osborne, Joseph Evans, GP ⁷²		Rosman
Ost, Walter M., GP ⁵¹		Higgins
Outland, Robert Boone, GP ⁵⁵	37	Rich Square
Outlaw, Jackson Kent, OALR ⁷⁰	578—116 W. North St.	Albemarle
Owen, Charles Fletcher, Jr., R ⁶²	Randolph Hosp.	Asheboro
Owen, Duncan Shaw, I ²⁰	2-3264—1920 Ft. Bragg Rd.	Fayetteville
Owen, George Franklin, Jr., I ²³	4-7921—212 Trust Bldg.	Durham
Owen, John Fletcher, P ⁷⁵	3-1282—511 Prof. Bldg.	Raleigh
Owen, Margaret Lineberry, GP ³⁵	2142—127½ Main St.	Canton
Owen, Robert Harrison, S ³⁵	2142—127½ Main St.	Canton
Owen, W. Boyd, GP ³⁵	Glendale 6-4601—Owen-Smith Clinic, 1426 N. Main St.	Waynesville
*Ownbey, Arthur Dennis, GP ³²	2-4422—415 W. Gaston St.	Greensboro
*Owens, Francis Leroy, ObG ⁵³	4264—Box 487	Pinehurst
*Owens, Zack Doxey, S ⁵⁸	4281—Med. Bldg.	Elizabeth City
Owsley, Lawrence H., S ³	4-3741—Watauga Hosp.	Boone
*Pace, Charles T., GP ⁶⁰	2269—State Bank Bldg.	Greenville
*Pace, Karl Busbee, (Hon.) GP ⁶⁰	2269—412 State Bank Bldg.	Greenville
Pace, Samuel Eugene, GP ⁵⁴	4750—Bullock Hosp. Clinic	Wilmington
Pace, Sherman Homer, GP ²³	1438 Gulf to Bay Blvd.	Clearwater, Fla.
Padgett, Charles King, ObG ¹⁷	7441—Shelby Medical Clinic	Shelby
Padgett, Philip Grover, GP ¹⁷	350—101 W. King St.	Kings Mountain
Page, Ernest B., Jr., I ⁷⁵	2005 Clark Ave.	Raleigh
Page, George Dantzler, S ⁵⁰	FR 2-5728—608 Prof. Bldg.	Charlotte

*Present at 1955 meeting

Page, William Gordon, Anes ²⁵	4-6361—743 Austin Lane	Winston-Salem
Painter, John B., GP ¹⁰	2643—P.O. Box 7	Cullowhee
*Painter, William Watson, S ³⁹	3-2611—417 E. Statesville Ave.	Mooreville
Palmer, Horace, (Hon.) GP ³³	291-1—Warren Bldg.	Littleton
Palmer, J. G., ED & I ²³	9031—N. C. Sch. of Med.	Chapel Hill
Palmer, Marion Cherigny, (Hon.) GP ⁶¹	83—Box 1156	Tryon
*Palmer, Yates Shuford, S ⁹	2152—Valdese Gen. Hosp.	Valdese
*Palmes, Wesley C., Jr., S ³⁹	8394—403 W. Broad St.	Statesville
*Palumbo, Leonard, Jr., ObG ²³	9031—N. C. Memorial Hosp.	Chapel Hill
Papineau, Alban, GP ¹⁸	3951—Washington St.	Plymouth
Parham, Asa R., S ³²	6073—649 N. Main St.	High Point
Parham, Sumner Malone, ObG ⁷¹	4812—523 S. Chestnut St.	Henderson
*Parker, Herman Richard, (Hon.) I ³²	2-3723—301 Jefferson Bldg.	Greensboro
Parker, J. W., Jr., GP ³³		Seaboard
Parker, Joseph B., Jr., P ²³	2713 Dogwood Road	Durham
Parker, Oscar Lee, (HON) OALR ⁶⁸	2430—Box 869, 104 Main Street	Clinton
Parker, Prentiss Edward, Jr., I ⁷¹		Booneville
*Parker, Roy Turnage, ObG ²³	6239—Box 3517, Duke Hosp.	Durham
*Parker, Samuel L., Jr., ObG ⁴⁴	2820—Kinston Clinic	Kinston
Parker, Shepherd Falkener, GP ¹⁷	6231—Box 102, 2½ E. Warren St.	Shelby
Parker, Wade Thomas, S & Ind ²⁰	2-4101—Pittman Hosp., Box 829	Fayetteville
Parks, Walter Beatty, GP ²⁷	5-0561—1051 W. Franklin St.	Gastonia
Parks, W. Craig, I ³²	9179—649 N. Main St.	High Point
Parrette, Nettie Coffey, GP ²⁹	51-J—Box 96, Parrette Clinic	Robbinsville
Parrette, Richard G., GP ²⁹	51-J—Box 96	Robbinsville
Parris, A. E., GP ²⁵	Ph. 3-4464—4014 Cherry St. Ext.	Winston-Salem
*Parrott, Frank Strong, S ⁶⁶	3980—126 W. Innes Street, Box 597	Salisbury
Parrott, John A., S ⁴⁴		Kenansville
Parrott, William Thomas, Jr., I ⁴⁴	4269—109 E. Gordon St.	Kinston
*Parsons, Lacy Jack, GP ⁶⁴	5614—P.O. Box 1057, Linhaw Bldg.	Lumberton
*Parsons, William Herbert (HON) GP ⁶³	2261—Box 186	Ellerbe
*Pascal, Robert A., GP ⁹	2152—Valdese General Hospital	Valdese
*Paschal, George Washington, Jr., S ⁷⁵	2-3431—311 Lands Bldg.	Raleigh
Paschold, John Henry, S ⁷⁰	1354—Box 468	Albemarle
Pate, Archibald Hanes, Pd ⁷⁷	1087—1008 E. Ash St.	Goldsboro
Pate, James Frank, GP ³⁵	2546—119½ Main St.	Canton
*Pate, James Gibson (Hon.) GP ⁶⁹	2671—Box G	Gibson
Pate, James Lloyd, GP ⁶⁴	5811—Box 67	Pembroke
Pate, Marion Butler, Jr., GP ⁶⁴	2281—123 W. Second St., Box 326	St. Pauls
Pate, William Henry, GP ⁷⁷	2077	Pikeville
*Patman, William Louis, S ¹⁴	118—229 E. Raleigh St., Box 48	Siler City
Patrick, Simmons Isler, R ¹⁴	6143—300 Rhodes Ave., Lenoir	
	Mem. Hosp.	Kinston
Patterson, Bernard L., GP ²⁶	680-1—Perry Bldg.	Louisburg
*Patterson, Carl Norris, ALR ²³	2-2136—1110 W. Main St.	Durham
Patterson, F. M. Simmons, S ¹⁹	4127—1402 Rhem Ave.	New Bern
Patterson, Fred Geer, GP ²³	9-3931—227 E. Franklin St.	Chapel Hill
*Patterson, Fred Marion, U ³²	2-1020—214 Elmwood Dr.	Greensboro
*Patterson, Hubert Clifton, ED & S ²³	9031—N. C. Mem. Hosp.	Chapel Hill
Patterson, Joseph F., S ¹⁹	4127—1402 Rhem Ave.	New Bern
Patterson, Joseph Halford, GP ¹³	Spring 8-1151—Box 506	Broadway
Patton, William Hugh, Jr., Pd ⁹	589—305 College St.	Morganton
Payne, E. Louise, ObG ⁷⁵	789 Howard Ave.	New Haven 4, Conn.
*Payne, John Abb, III, GP ²⁸	2611	Sunbury
*Peacock, H. M., S ¹²	611—Sealevel Community Hosp.	Sealevel
*Pearse, Richard Lehmer, ObG ²³	6-2291—604 W. Chapel Hill St.	Durham
Pearson, Arthur A., GP ³⁶	Arden 2341—Mt. Sanatorium	Fletcher
*Pearson, Hugh Oliver, GP ²⁴	3331—P.O. Box 26	Pinetops
*Peck, Harold A., R ⁵³	5611—Moore County Hosp.	Pinehurst
Peck, William Merrill, T ³⁸	Aberdeen 9131—N. C. Sanatorium	McCain
*Peebles, Charles Henry, Jr., OALR ³³	2-2136—1110 West Main Street	Durham
Peede, Alvin Wortham, GP ³¹	3441	Lillington
Peedin, James Harold, GP ⁵⁴	242—Box 248	Burgaw
*Peele, James Clarendon, ALR ⁴⁴	3974—Kinston Clinic	Kinston
*Peele, Talmage L., N ²³	9011—Box 3811, Duke Hosp.	Durham
Peeler, Clarence N., (Hon.) ALR ⁵⁰	3-1131—106 W. Seventh St.	Charlotte
Peeler, Forrest Edwards, GP ¹³	3531	Maiden
Peery, Vance Price, (Hon.) Ret. OALR ⁴⁴	2753—1105 Pollock St.	Kinston
Peete, Charles Henry, (Hon.) GP ⁷⁶	3891—Church St.	Warrenton
Pegg, Fred Grant, PH ²⁵	3-2471—Box 2975	Winston-Salem
Penick, George Dial, Path ²³	9031—N. C. Memorial Hospital	Chapel Hill
Pennington, Glenn Walton, ALR ⁵⁰	ED 4-0643—1318 Scott Ave.	Charlotte
Pennington, Robert B., Hosp. Res. ³	Hartford Hospital	Hartford, Conn.
Perrin, Thomas Samuel, Jr., I ⁵⁰	FR 6-4424—1361 E. Morehead St.	Charlotte 3
*Perry, D. Russell, Jr., Pd ²⁵	5-5173—207 S. Hawthorne Road	Winston-Salem
*Perry, David Russell, (Hon.) I ²³	4-3181—Depositors Nat. Bk. Bldg.	Durham
Perry, Ernest Monroe, (Hon.) GP ²⁴	8019—125 Sunset Ave.	Rocky Mount

Perry, Glenn Grey, Pr ³²	9261—136 Church St.	High Point
Perry, Henry Baker, Jr., ObG ³²	2-6137—344 N. Elm St.	Greensboro
Perry, Henry Baker, Sr. (Hon.) GP ³	AM 4-3941—Box 286	Boone
Perry, Robert E., D ³²	2-3510—312 Jefferson Bldg.	Greensboro
*Perry, S. Paul, R ²³	8-1231 Ext. 215—Watts Hospital	Durham
Perryman, Olin Charles, Jr., GP ²⁵	3-7031—105 E. Clemmons Rd.	Winston-Salem
Persons, Elbert Lapsley, I ²³	9011—Duke Hosp.	Durham
Peschel, Ernst, I ²³	9011—Duke Hosp.	Durham
*Peters, Ann DeHuff, Pd ²³	9031—N. C. Memorial Hospital	Chapel Hill
Peters, August Richard, Jr., Pd ⁵	1335—120 Washington St.	Washington
*Peters, Richard M., S ²³	9031—UNC Sch. of Med.	Chapel Hill
Peters, William Anthony, Jr., ObG ⁵⁸	2355—206 S. Road St.	Elizabeth City
*Peterson, Charles A., (Hon.) GP ⁵¹	5-2281—10 Hazel Ave.	Spruce Pine
*Peterson, Osler L., I ²³	9-5972—Miller Hall, Div. of Health Affairs, UNC	Chapel Hill
Petteway, George Henry, (Hon.) ObG ⁵⁰	FR 6-1554—1524 Elizabeth Ave.	Charlotte
*Pettus, William Henry, Jr., S ⁵⁰	FR 6-8544—1012 Kings Drive	Charlotte
Pfeiffer, John B., Jr., N ²³	9011—Box 3508, Duke Hosp.	Durham
*Pfohl, Samuel Frederick, (Hon.) I ²⁵	2-2822—403 S. Main St.	Winston-Salem
*Phelps, James S., GP ⁵²	4331—Box 5	Troy
Phelps, John Mahlon, GP ⁴⁸	2112	Creswell
Phifer, William Houston, GP ⁷³	AT 3-4323—207 W. Jefferson St.	Monroe
*Phillips, Charles A. Speas, U ³³	Pinehurst 5611—310 S. Ashe St.	Southern Pines
Phillips, David Lawrence, GP ⁵¹	POplar 5-4201—110 E. Oak Ave.	Spruce Pine
*Phillips, DeWitt Dewey, Jr., GP ⁵⁰	FR 5-6350—513 Professional Bldg.	Charlotte
*Phillips, Ernest Nicholas, GP ⁷⁸	87—100 B. St., P.O. Box 486	N. Wilkesboro
*Phillips, Marvin Worth, GP ²¹	362—54 Salem St.	Thomasville
Phillips, William A., D ⁵¹	3-5759—120 S. Third St.	Wilmington
Pickard, Henry Mack, I ⁵¹	6575—7 N. 17th St.	Wilmington
Pickrell, Kenneth L., PL ²³	9011—Duke Hospital	Durham
Pigford, Robert T., I ⁵¹	5020—1014 Murchison Bldg.	Wilmington
Pipes, David McKowen, A ⁸	3-4433—52 Page Ave.	Asheville
*Pishko, Michael T., ObG ⁵³	5611—Moore Co. Hosp.	Pinehurst
*Pittman, Alfred Rowland, Jr., I ⁶¹	5030—Johnson Bldg.	Lumberton
*Pittman, Dorn C., R ¹	4271—Alamance County Hosp.	Burlington
Pittman, James G., GP ⁶¹	6581—Box 145	Fairmont
*Pittman, Malory Alfred, S ⁷⁹	Wilson Clinic	Wilson
*Pittman, Raymond Lupton, (Hon.) S ²⁰	3-1650—Pittman Hosp.	Fayetteville
Pittman, William Austin, OALR ²⁰	423 Hay Street	Fayetteville
Pitts, William Reid, NS ⁵⁰	ED 4-5587—1012 Kings Dr.	Charlotte 7
Piver, James DeCamp, S ⁵⁶	4235—729 Court St., P.O. Box 916	Jacksonville
Piver, William Crawford, Jr., GP ⁵	1335—Taylor Hosp.	Washington
Pixley, Rowland T., ObG ⁵⁰	FR 5-8053—Meyers Park Medical Bldg.	Charlotte
Pizer, Morton E., Pd ⁷⁵	3-2674—2019 Clark Avenue	Raleigh
Pleasants, George D., GP ¹⁴	328—136 N. Chatham Ave.	Siler City
Plonk, George W., S ⁷⁵	2-4912—Prof. Bldg.	Raleigh
*Plyler, Cranford Oliver, Jr., GP ⁷⁰	110—22 Henderson Street	Badin
Podger, Kenneth Arther, ObG ²³	6-2291—604 W. Chapel Hill St.	Durham
Pool, Bennette Baucom, (Hon.) A ²⁵	3-1134—414 Nissen Bldg.	Winston-Salem
Pool, Charles Glenn, Pd ²⁵	2-9942—636 Nissen Bldg.	Winston-Salem
Poole, Marvin Bailey, GP ³⁴	2380—Corton-Dale Hotel	Dunn
Pope, Robert Clyde, Pd ⁷⁹	7-1182—Wilson Clinic	Wilson
Porter, Richard A., GP ³⁶	5128—5th Ave. West	Hendersonville
*Postlethwait, Raymond Woodrow, S ¹⁴	2174—Parrott's Hosp.	Kinston
*Poteat, Hubert McNeill, Jr., S ⁴¹	2191—207 S. Third St.	Smithfield
Pott, Walter Hawks, ObG ⁶⁰	4131—Med. Arts Clinic	Greenville
Potter, E. Lindsay, Jr., GP ⁵⁰	4-3070—1112 Independence Bldg.	Charlotte
Powell, Albert Henry, I ²³	4-5721—212 W. Main St.	Durham
Powell, Charles James, GP ⁵¹	2-0258—515 Murchison Bldg.	Wilmington
Powell, Eppie Charles, Jr., ObG ⁷⁷	293—1008 East Ash St.	Goldsboro
Powell, Herman Sutton, GP ²⁷	7121—1326 W. Franklin Ave., Box 2365	Gastonia
Powell, Jack, S ⁸	3-1529—602 New Med. Bldg.	Asheville
Powell, Jesse Averette, (Hon.) GP ¹⁶		Edenton
Powell, William Ernest, Jr., GP ⁴⁷	2581—1 Chestnut St.	Mars Hill
Powell, William Flynn, OALR ⁸	8931—810 City Hall Bldg.	Asheville
Powers, Douglas F., GP ³	2650th USAF Hosp., C-19 Dispensary	
	Sampson AFB	New York
*Powers, Earl J., Or ²⁵	8533—Nissen Bldg.	Winston-Salem
Powers, Frank Poydras, OALR ⁷⁵	5252—704 Prof. Bldg.	Raleigh
*Powers, John Alfred, Or ⁵⁰	Ed 4-4641—1500 Elizabeth Ave.	Charlotte
Prather, Fonzo Goff, GP ⁸	2-1612—251 Tunnel Rd.	Asheville
*Prefontaine, J. Edouard, OALR ³²	2-4455—401 Jefferson Bldg.	Greensboro
Pressly, Claude Lowry, S ⁵⁰	FR 6-2446—1012 Kings Drive	Charlotte
Pressly, David Lowry, GP ³⁹	5671—Stearns Bldg.	Statesville
Pressly, James Lowry, I ³⁹	8548—303 Davie Ave.	Statesville
Preston, Ellen Katherine J., Pd ⁵⁴	24-2562—P.O. Box 1678	Wilmington
Preston, John Zennas, GP ⁶¹	80	Tryon

*Present at 1953 meeting

*Prichard, Robert W., Path & CP ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Prince, George Edward, Pd ²⁷	5-3541—318 South St.	Gastonia
Prince, John S., GP ³³	2535—412 Ingleside Ave.	Emporia, Va.
*Printz, Don Ralph, D ⁸	5531—315 City Bldg.	Asheville
*Pritchard, George Littleton, (Ret) ⁴¹		Black Mountain
*Pritchett, Newton George, I ⁷⁵	4-7171—2029 Clark Ave.	Raleigh
Procter, Ivan Marriott, (Hon.) Ret., ObG ⁴⁰	5040—209 Hillcrest Rd.	Raleigh
Proctor, James Thornton, P ²³	9031—Dept. of Psychiatry, UNC Med. Sch.	Chapel Hill
*Proctor, Richard Culpepper, P ²⁵	3-7391—Graylyn	Winston-Salem
Prusa, Victor H., GP ³⁹	2212—Alexander Co. Hosp.	Taylorsville
Pryor, William Watkins, C & I ²³	710 A Pendleton St.	Greenville, S. C.
*Pugh, Charles Harrison, (Hon) GP ²⁷	5-3261—Box 527	Gastonia
Pulliam, B. E., GP ²⁵	Robin Hood Rd.	Winston-Salem
*Pully, Rose, GP ⁴⁴	7-0230—1009 N. College St.	Kinston
*Pumphrey, Albert F., S ⁷	3136—P.O. Box 627	Elizabethtown
Purdy, James Jarratt, (Hon.) GP ⁵⁷	27-1—Box 526	Oriental
Putney, Robert Hubbard, Jr., GP ⁷⁹	5241—Box 155	Elm City
*Query, Luke W., Jr., I ⁶²	3218—533 S. Fayetteville St.	Asheboro
*Query, Richard Zimri, Jr., I ⁵⁰	FR 5-1719—1225 E. Morehead St.	Charlotte
Quickel, John Cephas, OALR ²⁷	6441—Med. Bldg.	Gastonia
Rabil, William E., S ²⁵	2-3691—205 South Hawthorne Rd.	Winston-Salem
Rabold, Bernard Louis, S ¹³	360—Catawba Gen. Hosp.	Newton
Rabold, Leonard James, I ³²	2-5634—1209 Magnolia St.	Greensboro
*Raby, James Grover, (Hon.) GP ²⁴	4262—300 St. Patrick St.	Tarboro
*Raby, William Thomas, I ⁵⁰	FR 5-1932—101 Queens Rd.	Charlotte
Ragaz, Florian J., GP ⁴⁹	2-2401—31 W. Henderson St.	Marion
*Raiford, Fletcher Lindsay, Pd ³⁶	3296—416 Church St.	Hendersonville
*Raiford, Theodore Sidney, S ⁸	2-1135—20 Battery Park Ave.	Asheville
*Rainey, William Thomas, Sr., (Hon.) I ²⁰	3-0136—107 Bradford Ave.	Fayetteville
Ramsaur, Jackson Townsend, PH ²⁷	6364—146 S. York St.	Gastonia
Ramsay, James Graham, (Hon.) S ⁵	1335—120 Washington St.	Washington
Ramseur, William Lee, GP ⁴⁷	4—Box 428	Kings Mountain
Rand, Cecil Holmes, GP ⁷⁷	2231—Main Street	Fremont
*Randolph, Angus Crawford, P ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
*Raney, Richard Beverly, Or ²³	9031—N. C. Mem. Hosp.	Chapel Hill
Rankin, Pressly Robinson, (Hon.) Ret., GP ⁵²		Mt. Gilead
*Rankin, Pressly Robinson, Jr., GP ⁵²	4861—Box 205	Mt. Gilead
*Rankin, Richard Brandon, (Hon.) OALR ¹⁰	4185—53 S. Union St.	Concord
*Rankin, Richard E., GP ²⁷	8—Box 565	Mt. Holly
Rankin, Watson Smith, (Hon.) Ret., Hosp Ad ⁵⁰	ED 3-4013—2049 Briarwood Rd.	Charlotte 7
Ranson, John Lester, Jr., I ⁵⁰	6-4852—2819 Glendale Road.	Charlotte
Ranson, William A., I ⁵⁰	1718 25th Ave.	San Francisco 22, Calif.
Raper, James Sidney, R ⁸	5674—20 Battery Park Ave.	Asheville
Rapp, Ira H., Or ⁵⁰	ED 4-4641—1500 Elizabeth Ave.	Charlotte
*Rasberry, Edwin Albert, Jr., I ⁷⁹	7-1182—Woodard Herring Hosp.	Wilson
Rathbun, Lewis Standish, ObG ⁸	3-0800—29 N. Market St.	Asheville
*Ravenel, Samuel Fitzsimons, Pd ³²	2-4187—104 S. Northwood	Greensboro
Ray, John B., (Hon.) GP ⁶⁵	104	Leaksville
Ray, Ritz Clyde, (Hon.) GP ³		West Jefferson
Rayle, Wiley Wallace, GP ¹³	130th Station Hosp. APO 403 C/o P.M.	San Francisco
*Redding, John O., OALR ⁶²	5242—147 McArthur St.	Asheboro
Redwine, James Daniel, ObG & Pd ²¹	3547—Court Square	Lexington
*Reece, John Cochrane, Path & CP ⁹	576—Grace Hosp.	Morganton
Reeser, A. W., GP ⁶⁵	NA 3-7412—Box 186	Leaksville
Reeves, Jerome Lyda, (Hon.) GP ³⁵	2430—Medical Bldg.	Canton
*Reeves, Robert James, R ²³	9011—Duke Hosp.	Durham
*Register, John Francis, Or ³²	4-0161—137 Bishop St.	Greensboro
Reid, Calvin Graham, I & GE ⁵⁰	ED 2-5056—1225 E. Morehead St.	Charlotte
Reid, Charles Hamilton, Jr., I ²⁵	824 Nissen Bldg.	Winston-Salem
Reid, James William, (Hon.) GP ²⁷	4-1334—Box 7	Lowell
Reid, Ralph Conner, GP ⁵⁰	21F—Pineville Hosp.	Pineville
Reid, William Joseph, GP ³²	4-4001—1203 Fairview St.	Greensboro
Reinhardt, James Franklin, I ⁴⁵	Crowell Hosp.	Lincolnton
Reinhart, John B., Pd ²⁵	3811 O'Hara Street	Pittsburgh 13, Pa.
Reitzel, Claude Everett, (Hon.) GP ³²	1105 Lindsay St.	High Point
Rendleman, David A., GP ⁶⁶	3550—700 Wallace Bldg.	Salisbury
Reynolds, Carl Vernon, (Hon.) Ret., PH & T ⁷⁵	1100 N. Y. Drive	Altadena, California
Reynolds, Ernest Harold, GP ⁶⁵	3011—117 Gilmer St.	Reidsville
*Reynolds, Frank Russell, Pd ⁵⁴	3-4272—1613 Dock St.	Wilmington
Reynolds, Joyce Hinson, GP ²⁵	5391—109 Clifton St.	Kernersville

*Rhodes, James Slade, Jr., GP ⁴⁸	2186—Williamston Clinic	Williamston
*Rhodes, John Sloan, U ⁷⁵	4-4391—700 W. Morgan St.	Raleigh
Rhudy, Booker Ephram, R ³²	3-7558—Route 10, Box 286	Greensboro
Rhyne, Sam Albertus, (Hon.) GP ³⁹	6122—407 Walnut St.	Statesville
*Rice, A. Douglas, Pd ²³	708 Louise Circle	Durham
Rice, Edmond Lee, S ²⁰	Lahore	Pakistan
*Rice, Robert S., S ¹⁰	4251—Kannapolis Highway	Concord
Richards, Charles E., I ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Richardson, Ernest Christopher, Jr., ObG ¹⁹	3780—413 Pollock St.	New Bern
Richardson, Frank Howard, (Hon.) Pd ⁸	5211—Children's Clinic	Black Mountain
*Richardson, James Justus, S ⁶⁹	1055—600 McLean St.	Laurinburg
*Richardson, William Perry, PH & Ed ²³	9031—Box 758, N. C. Mem. Hosp.	Chapel Hill
*Richman, Samuel, ³²	342 N. Elm St.	Greensboro
*Riddle, Harry Duff, GP ²⁷	5-2334—166 W. Franklin St.	Gastonia
Ridge, Clyde Franklin, GP ³²	517 N. Main St.	High Point
*Riggs, Millard McAdoo, GP ⁹	1798—Box B.	Drexel
*Rippy, William D., GP ¹	3976—272 N. Graham-Hopedale	Burlington
*Ritchie, John A., P ²³	8-1271—V. A. Hospital	Durham
Roach, Leonard H., ObG ⁸	2-6454—610 City Bldg.	Asheville
*Roach, Robert B., S ¹¹	PL 4-7810—Blackwelder Hosp., 351 S. Mulberry St.	Lenoir
Robbins, Jack G., D ²³	8-4361—719 Broad Street	Durham
Roberson, Edward Leon, S ²⁴	3101—305 St. Andrews St.	Tarboro
Roberson, Foy, (Hon.) S ²³	2-8221—512 Jackson St.	Durham
Roberson, Robert Stuart, GP ³⁵	Glendale 6-3251—102 Brown Ave.	Hazelwood
*Roberts, Bennett Watson, Pd ²³	5-2611—602 W. Chapel Hill St.	Durham
Roberts, Elizabeth Marie, GP ²³	4-2935	Bahama
*Roberts, Louis Carroll, U ²³	8-1297—1200 Broad St.	Durham
*Roberts, R. Winston, Oph ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Roberts, William McKinley, Or ²⁷	7210—Realty Bldg., Box 176	Gastonia
Robertson, Carroll Bracey, GP ³³	2551—P.O. Box 544	Jackson
Robertson, Edwin Mason, S ²³	3-1161—Box 603	Durham
Robertson, James Farish, (Hon.) S ⁵⁴	756—325 Canal St.	New Smyrna Beach, Florida
Robertson, James Mebane, GP ³⁹		Harmony
Robertson, John Kenneth, GP ⁶⁴	2211—Box 67	Pembroke
Robertson, John Newton, (Hon.) OALR ²⁰	2-4636—Box 30	Fayetteville
Robertson, Leon W., GP ²⁴	6-8126—224 Rose St.	Rocky Mount
*Robertson, Lloyd Harvey, GP ⁶⁶	845—101 N. Main St., Box 519	Salisbury
Robertson, Logan Thomson, Ind ⁸	3-5366—247 Charlotte St.	Asheville
Robinson, Charles Wilson, GP ⁵⁰	ED 2-4755—403 N. Tryon St.	Charlotte
*Robinson, Donald Edward, Pd ¹	6-0309—308 W. Davis St.	Burlington
Robinson, James Lee, S ²⁷	5-5141—155 S. York St.	Gastonia
Robinson, John Daniel, (Hon.) GP ²²	2621—321 E. Main St., Box 486	Wallace
†Robinson, W. J., (Hon.) GP ³		Creston
Robinson, Whitfield Locke, GP ⁴⁷	Box 325	Mars Hill
Rodda, John Sydney, GP ¹⁵	126—Rodda Van Gorder Hosp.	Andrews
Rodgers, William Daniel, (Hon.) GP ⁷⁶	4331	Warrenton
*Rodman, Clark, I ⁵	1336—120 Washington St.	Washington
Rodwell, Eleanor, GP ²³	5-8441—111 Corcoran St.	Durham
Rogers, Gaston Wilder, PH ²³	7641—Box 598	Chapel Hill
Rogers, Max Pritchard, S ³²	8911—649 N. Main St.	High Point
Rogers, Seymour Shulman, S ³²	2-4632—1001 N. Elm St.	Greensboro
Rollins, Charles Dick, GP ⁷⁴	5411—238 Orange St., P.O. Box 548	Henderson
Romeo, Bruno J., I ³⁶	3483—501 Sixth Ave., W.	Hendersonville
*Romm, William Henry, GP ⁵⁸	332—P.O. Box 1	Moyock
Root, Aldert Smedes, (Hon.) Pd ⁷⁵	2300 Whiteoak Road	Raleigh
Rose, Abraham Hewitt, (Hon.) GP ⁴¹	2268	Smithfield
Rose, Ira Woodall, Jr., S ²⁴	2-4627—205 Rose St.	Rocky Mount
Rose, James William, GP ⁷⁷	2071	Pikeville
*Ross, Donald MacConnell, S ¹	6-8416—401 W. Davis St.	Burlington
*Ross, Otho Bescent, (Hon.) GP ⁵⁰	ED 3-7797—1012 Kings Drive	Charlotte
Ross, Otho B., Jr., I ⁵⁰	ED 3-7797—1012 Kings Drive	Charlotte
*Ross, Robert Alexander, ObG ²³	9031—UNC Mem. Hosp.	Chapel Hill
Ross, Thomas Wallace, GP ⁵⁰	ED 4-9446—1912 Central Ave.	Charlotte
*Ross, Willis Richard, ⁷⁰	495—123 North First Street	Albemarle
†Rosser, Robert Guthrie, (Hon.) GP ⁵³	2151—P.O. Box 78	Vass
Rothstein, Leonard Milton, P ²³	8-1271—V. A. Hospital	Durham
*Rousseau, James Parks, (Hon.) R ²⁵	2-2041—1014 W. 5th St.	Winston-Salem
Rowe, George Catlett, GP ⁴⁹	6251—10 S. Logan St.	Marion
†Rowe, Virginia Coneland, Anes & Ph ⁴⁹	6251—10 S. Logan St.	Marion
*Royal, Benjamin Franklin, (Hon.) S ¹²	6-4225—907 Evans St., Box 628	Morehead City
*Royal, Donnie Martin, GP ⁶⁸	2153—Box 156	Salemberg
Royster, Chauncey Lake, I ⁷⁵	3-3055—707 W. Morgan St.	Raleigh
Royster, Hubert Ashley, (Hon.) Ret., S ⁷⁵	9788—2318 Beechridge Rd.	Raleigh

*Present at 1955 meeting

†Deceased

Royster, J. Dan, GP ⁴¹	2446—Box 68, Elm St.	Benson
Royster, Thomas Sampson, Jr., S ⁷¹	3410—221 Orange St.	Henderson
*Ruark, Robert James, ObG ⁷⁵	4-7386—712 St. Mary's St.	Raleigh
Rubin, Adrian Stevens, Pd ³²	3-6911—342 N. Elm St.	Greensboro
*Rubin, M. Harvey, Oph ³²	8930—Jefferson Bldg.	Greensboro
Rudd, Paul Dalton, I ⁶⁵	6222	Reidsville
*Ruffin, David Winston, OALR ¹⁴	2-0891	Pink Hill
Ruffin, Jennings Bryan, GP ³⁷	2517—123 RR Street	Ahoskie
Ruffin, Julian Meade, I & GE ²³	9011—Duke Hosp.	Durham
Ruland, M. B., GP ²⁵	857 W. 5th St.	Winston-Salem
Rundles, R. Wayne, I ²³	9011 Ext. 294—Duke Hosp.	Durham
Russell, Charles Richard, (Hon.) I ¹¹	332—Box 173	Granite Falls
Russell, Jesse Milton, (Hon.) GP ³⁵	2674—127½ Main St.	Canton
Russell, Phillip E., I ⁸	City Bldg.	Asheville
*Russell, William Marler, OALR ⁸	3-2481—68 Patton Ave.	Asheville
Rutledge, Mary Louise, Pd ⁵⁰	FR 5-1441—1901 E. Fifth St.	Charlotte
Sabiston, Frank, OALR ¹¹	2537—115 E. Gordon St.	Kinston
Sader, Julius, GP ⁷²	Turner 2-1241—15 E. Jordan St.	Brevard
Sadler, Ralph Calvert, (Hon.) I ¹⁸	2706—615 S. Madison St.	Whiteville
Sale, Charles Steven, ALR ⁵⁴	3-3940—1010 Murchison Bldg.	Wilmington
Saleeby, Richard G., Pr ⁷⁵	3-2541—224 Hillsboro St.	Raleigh
*Salley, E. McQueen, (Hon.) GP ³⁶	5324—124 W. 4th Ave. W.	Hendersonville
Salter, Theodore, GP ¹²	2-4856—Box 58	Beaufort
Salters, Frederic Hay, OALR ⁵⁸	6180—Med. Bldg.	Elizabeth City
Sample, Robert Cannon, (Hon.) GP ³⁶	3526—Box 643	Hendersonville
*Sams, William Albert, (Hon.) GP ¹⁷	3391—Main St., Box BB	Marshall
Sanders, James H., Jr., GP ⁷²		Brevard
Sanders, Lee Hyman, Pd ⁷⁵	2-0587—627 W. Jones St.	Raleigh
Sanford, Joseph Arthur, Ind ⁶⁵	Main 3-2123—Field Crest Mills	Spray
Sanger, Paul Weldon, S ⁵⁰	FR 6-6511—1012 Kings Drive	Charlotte 7
Sapp, Oscar LeMay, Hosp. Res. ³²	Ph. Randolph 31000, Walter Reed	
	Army Hosp.	Washington, D. C.
Sarazen, Paul M., Jr., Pd ¹⁷	Children's Clinic	Shelby
Sargent, Winston Arthur Young, S ⁵¹	176—Yancey Hospital, Inc.	Burnsville
Saunders, Sheldon Asa, (Hon.) GP ⁶	2026—Box 25	Aulander
*Saunders, Stanley Stewart, Pd ³²	4074—641 N. Main St.	High Point
*Sawyer, C. Glenn, I ²⁵	4-6361—Bowman Gray School	
	of Medicine	Winston-Salem
*Sawyer, Logan Everett, I ⁵⁸	2900—104 W. Colonial Ave.	Elizabeth City
Scarborough, Charles Foster, GP ⁵²	2761—Box 318	Star
*Schafer, Earl W., Or ³²	6942—521½ N. Main St.	High Point
Schallert, Paul Otto, (Hon.) I ²⁵	Winter Park 26-2462—Box 262,	
	Altamonte Springs	Florida
Scheiber, Herman, Jr., ⁵³	145 Hicks St.	Brooklyn, New York
Schenck, Sam Moore, (Ret.) S ¹⁷		Shelby
*Schiebel, Herman Max, S ²³	8-1245—1202 Broad St.	Durham
*Schlaseman, Guy W., R ²³	8-1231—Watts Hospital	Durham
*Schoenheit, Edward William, (Hon.) I ⁸	2-6241—46 Haywood St.	Asheville
Schools, Percy E., Jr., I ³³	7-3047—Rosemary Clinic	Roanoke Rapids
Schwartz, Theodore B., I ²³	8-1271—VA Hosp.	Durham
Schweizer, Donald Conrad, ObG ³²	4-1355—153 Bishop Street	Greensboro
Scott, Alan F., GP ⁶⁶	3283—Barker St.	Salisbury
*Scott, Annie V., Pd ²³	N. C. Memorial Hosp.	Chapel Hill
Scott, Benton V. D., PH ¹³	Ph. 3883—Catawba County Health Center	Hickory
Scott, Peter Somers, GP ¹	RFD 2	Burlington
Scott, Samuel Floyd, (Hon.) GP ¹	6-4602—Route 2	Burlington
*Sealy, Will Camp, S ²³	9011—Duke Hosp.	Durham
Sears, Warren W., GP ⁵⁰	ED 4-1232—824½ E. Trade St.	Charlotte
Seear, Torben, ObG ²⁷	5-2147—114 W. Third Ave.	Gastonia
Seay, Hillis Ledbetter, GP ⁵⁰	TR 5-6521—Mecklenburg Sanatorium	Huntersville
*Seay, Thomas Waller, (Hon.) GP ⁶⁶	Salisbury 283—Bk. Bldg.	Spencer
Seigman, Edwin Lincoln, R ²⁴	Jamaica 6-1000—U. S. Naval	
	Hosp.	St. Albans 25, Long Island
*Selby, William Elledge, GP ⁵⁰	ED 2-0059—121 W. Seventh St.	Charlotte 2
Semans, James H., U ²³	9011—Duke Hospital	Durham
Senter, William Jeffress, I ⁷⁵	5125—702 W. Jones St.	Raleigh
Sessions, John T., Jr., GE & ED ²³	9031—Dept. of Med. Univ. of NC	Chapel Hill
Seyern, Henry Doeller, Or ⁸	3-7656—283 Biltmore Ave.	Asheville
*Shackelford, Robert, GP ⁷⁷	West Main St.	Mount Olive
*Shackleford, Ernest Dabney, Jr., GP ⁶²	6325—2001 Liberty Rd.	Asheboro
*Shafer, Irving Everett, (Hon.) GP ⁶⁶	86—108 W. Innes St., Box 635	Salisbury
Shafer, Irving Everett, Jr., R ⁶⁶	3535 A. F. Hosp., Mather Airfield	
	Base	Mather Field
Shaffner, Louis DeS., S ²⁵	4-6361—Bowman Gray School	
	of Medicine	Winston-Salem

*Present at 1955 meeting

*Shaia, William Harry, GP ⁵⁰	FR 5-3217—2125 Berryhill Rd.	Charlotte
Shands, Harley C., P ²³	9031—N. C. Memorial Hospital	Chapel Hill
*Sharp, Oliver Ledbetter, (Hon.) C ³²	7405—101 N. Elm St.	Greensboro
Sharpe, Charles Ray, (Hon.) OALR ²¹	2643—23 W. Second St., Box 474	Lexington
Shaver, William Trantham, (Hon.) S ⁷⁰	539—330 N. First St.	Albemarle
*Shaw, John Alexander, Pd ²⁰	3-4141—1606 Morganton Rd.	Fayetteville
Shaw, Lloyd Roosevelt, Ob ³⁹	9088—709 West End Ave., Davis Hosp.	Statesville
Shelburne, Palmer Augustine, I ³²	2-5675—220 Med. Arts Bldg.	Greensboro
Shepard, Karl, I ³²	5949—205 W. Howell St.	High Point
Sheridan, Robert John, Pd ²⁴	Ph. 3252—300 St. Patrick St.	Tarboro
Sherrill, Frank H., Jr., GP ⁶⁵	116 W. Franklin St., Pace Bldg.	Leaksville
Sherrill, Herbert Rankin, GE ¹⁷	9631—Royster Bldg.	Shelby
Sherrill, John F., R ²³	8-1231—Watts Hosp.	Durham
Sherrill, Phil Minnis, S ²¹	360—50 Salem St.	Thomasville
Shields, William Earnest, S ⁶⁵	117 Gilmer St.	Reidsville
Shifley, Glen M., Anes. ⁸	5 White Oak Rd.	Arden
*Shingleton, William W., S ²³	9011—Duke Hosp.	Durham
*Shinn, George Clyde, GP ⁶⁶	Box 183	China Grove
Shipley, John LeRoy, OALR ⁵⁸	4305—214 Kramer Bldg.	Elizabeth City
Shirey, John L., A ⁸	3-4433—52 Page Ave., 801 Public Service Bldg.	Asheville
Shuford, Jacob Harrison, S ¹³	2-5261—7 Main Ave. Place, S. W.	Hickory
Shuford, Mary Frances, GP ⁸	8361—525 Legal Bldg.	Asheville
Shuler, James Edward, (Hon.) GP ²³	7-5252—1905 Driver Ave.	Durham
Shull, Joseph Rush, (Hon.) R ⁵⁰	ED 2-8147—323 Prof. Bldg.	Charlotte
Shull, William H., I ⁵⁰	FR 6-4836—1012 Kings Drive	Charlotte
*Sidbury, James Buren, (Hon.) Pd ⁵⁴	9758—15 N. Fifth St.	Wilmington
Sieker, Herbert Otto, I ²³	9011—Duke Hosp.	Durham
Siewers, Christian Fogle, Or ²⁰	2-2972—201 Churchhill Drive	Fayetteville
*Sikes, Charles Henry, S ³²	4-4877—323 Jefferson Bldg.	Greensboro
Sikes, Gibson L., (Hon.) GP ⁶⁸	1909 St. Mary's St.	Raleigh
Silsby, Harry Zettelmeyer, GP ³⁶	7128—Box 184, 133½ W. Fourth Ave.	Hendersonville
Silver, George A., P ²³	9011—Duke Hosp.	Durham
*Silvertown, George, R ⁶⁴	3211—Robeson Co. Mem. Hosp.	Lumberton
Simmons, Alexander Wingate, GP ¹	6-7466—432 Webb Ave.	Burlington
*Simons, Claude Ernest, GP ⁷⁹	6135—Carolina Gen. Hosp.	Wilson
*Simpson, Henry Hardy, GP ¹	Burlington 6-1279	Elon College
Simpson, Paul Ervin, ObG ⁷⁵	2-7742—2115 Clark Ave.	Raleigh
Simpson, Thomas W., I ²⁵	601 Reynolds Bldg.	Winston-Salem
Sinclair, Carter A., GP ¹³	3806—214 N. Center Street	Hickory
Sinclair, Lewis Gordon, S ⁷⁵	2-4912—336 Prof. Bldg.	Raleigh
Sinclair, Robey Thomas, Jr., R & S ⁵⁴	3-1614—Bulluck Hosp. Clinic	Wilmington
Singleary, George Currie, (Hon.) GP ⁷	2661—Box 246	Clarkton
Singleary, William Vance, I ²³	5-2201—306 S. Gregson St.	Durham
Sink, Charles Shelton, (Hon.) GP ⁷⁸	29J—Box 607	N. Wilkesboro
Sinnett, John Franklin, GP ¹³	103—120 N. Main St.	Newton
*Siske, Grady Cornell, GP ³²	4-3917	Pleasant Garden
Size, George Franklin, GP ¹⁵		Murphy
Skeen, Leo Brown, GP ³⁹	3-5671—804 N. Main St., Box 208	Mooreville
*Skinner, Benjamin Smith, Pd ²³	6-0081—403 Jackson St.	Durham
Slagle, Thomas Dick, S ⁴⁰	234—Box 456	Sylva
*Slate, John Samuel, (Hon.) GP ²⁵	2-1539—1215 W. Fourth St.	Winston-Salem
Slate, John William, (Hon.) GP ³²	4518—203 E. Green St.	High Point
Slate, Joseph Esmond, GP ³²	203 E. Green St.	High Point
*Slate, Marvin Longworth, OhG & Pd ³²	4518—203 E. Green St.	High Point
Sloan, Allen Barry, GP ³⁹	3-4121—312 South Academy Street, Box 239	Mooreville
Sloan, David Bryan, (Hon.) OALR ⁵⁴	P. O. Box 277	Wilmington
Sloan, Henry Lee, Sr., (Hon.) Oph ⁵⁰	ED 3-1131—106 W. Seventh St.	Charlotte 2
Sloan, Henry Lee, Jr., Oph ⁵⁰	ED 3-1131—106 W. Seventh St.	Charlotte
Sloan, William Henry, (Hon.) GP ⁶⁸	151—Box 128	Garland
Sloop, Eustace H., (Hon.) GP ⁴	Newland-Republic 3-4318—Box 228	Crossnore
Sluder, Fletcher S., ObG ⁸	8237—506 Flatiron Bldg.	Asheville
Sluder, Harold M., ObG ⁵⁰	FR 6-0463—1012 Kings Drive	Charlotte
Small, Victor Robert, (Hon.) GP ⁶⁸	3126—709 College St., Box 387	Clinton
*Smart, Gardner Ford, OALR ⁸	8031—801 City Bldg.	Asheville
Smathers, Irma Carlene Henderson, GP ⁸	3-3611—1295 Merrimon Ave.	Asheville
*Smedberg, George Andrew, S ¹	7471—1308 Rainey St.	Burlington
Smeltzer, Dave H., GP ⁵⁰	6-9423—3227 Tuckaseegee Rd.	Charlotte
*Smerznak, John Joseph, I ¹⁰	6166—209 E. Corban St.	Concord
*Smethie, William Massie, S ²	14—Anson Sanatorium	Wadesboro
Smith, A. Parker, GP ⁷⁷	3001—P. O. Box 216	Fremont
Smith, Albert G., Path ²³	8-1271—VA Hospital	Durham
Smith, Albert Heyward, Jr., GP ³⁵	Glendale 6-3005—Box 590	Waynesville
Smith, Alick Thomas, (Hon.) Ret., GP ³²	Rt. 3, Box 391 B	Greensboro

Smith, Anderson Jones, (Hon.) GP ⁷⁹	Wilson 7-1912—Box 83	Black Creek
*Smith, Annie Thompson, GP ²³	4-3331—316 Trust Bldg.	Durham
Smith, Bernard Reid, (Hon.) GP ⁸	2-6331—32 St. Dunstan's Road	Asheville
*Smith, Charles Gordon, GP ³¹	577	Snow Hill
Smith, Claiborne Thweat, (Hon.) I ²¹	2-6181—404 Falls Road	Rocky Mount
Smith, David Clark, GP ²¹	W. 3rd St.	Lexington
Smith, David Tillerson, T & I ²³	9011—Duke Hospital	Durham
Smith, Eustace H., GP ¹	Rep. 3-4318—Box 56, Garrett Mem. Hosp.	Crossnore
Smith, Everett D., S	Enka 7-1451	Candler
*Smith, Fitzhugh Lee, GP ¹	6-0946—115 E. Front St., Box 737	Burlington
*Smith, Franklin Carlton, (Hon.) Oph ⁵⁰	FR 3-1131—106 W. Seventh St.	Charlotte
Smith, George Marvin, (Hon.) GP ⁷³	Atlantic 3-2721—Secrest Bldg.	Monroe
*Smith, Harold Benjamin, GP ⁷⁸	445—113 9th St.	N. Wilkesboro
Smith, J. Alexander, (Hon.) Ret., S ²¹	2933	Lexington
Smith, James J., GP ⁶⁰	4353—202 W. 3rd St.	Greenville
Smith, Jay Leland, Jr., GP ⁶⁶	498—110 4th St.	Spencer
*Smith, John Goodrich, I ²¹	2-6181—404 Falls Road	Rocky Mount
Smith, Joseph, GP ⁶⁰	4353—202 W. 3rd St.	Greenville
*Smith, Joseph Elmer, (Hon.) GP ⁶	2921	Windsor
Smith, Joseph Pinkney, GP ²⁷	5-3484—Box 1236	Gastonia
*Smith, M. Jean, ObG ⁷⁹	7-0169—400 W. Nash Street	Wilson
Smith, Melvin Bowman, GP ⁶²	3121	Ramseur
*Smith, Opie Norris, I ³²	3-2584—363 N. Elm St.	Greensboro
*Smith, Oscar Fennell, (Hon.) GP ³³	422-1—111 North Main St.	Scotland Neck
Smith, Pennington Foyell, GP ²¹	2159—Kildee & Carolina Ave.	Lexington
*Smith, Robert Edwin, OALR ⁷¹	830—304 N. Main St.	Mt. Airy
*Smith, Roy Meadows, Pd ³²	3-9404—1023 N. Elm St.	Greensboro
Smith, Sidney S., Jr., U ⁷⁵	127 West Hargett Street	Raleigh
Smith, Slade Alvah, (Hon.) OALR ¹⁸		Whiteville
Smith, Stuart Cameron, D ⁵⁰	760 Lakeland Drive, Apt. 10B	Jackson, Miss.
Smith, Wilford M., GP ⁵⁰	FR 7-3730—2916 C. Selwyn Ave.	Charlotte
*Smith, William Alexander, T ⁷⁵	4-3611—N. C. State Board of Health	Raleigh
Smith, William Carey, GP ⁷⁷	24—Bank of Wayne Bldg.	Goldsboro
*Smith, William Gordon, S ²¹	495—17 Randolph St., Box 546	Thomasville
Smith, William Mitchell, GP ³	109 Appalachian St.	Boone
Snelling J. McL., S ⁵⁰	ED 3-1221—810 Professional Bldg.	Charlotte
Snider, Bobby Eugene, GP ²¹		Welcome
*Snipes, Richard Dean, ObG ²⁰	2-4660—809 Arsenal Ave.	Fayetteville
Sorrell, Furman Yates, GP ²	37—E. Wade St.	Wadesboro
Sorrow, John Mitchell, Jr., I ²³	9031—N. C. Mem. Hosp.	Chapel Hill
*Sowers, Roy Gerodd, (Hon.) OALR ¹³	4-1141—Box 333	Sanford
Sox, Carl Caughman, GP ¹¹	3611—Box 66	Kenly
*Spaugh, Earle, Pd ⁵⁰	ED 3-3606—1526 Harding Place	Charlotte
Spaeth, Walter, I ⁵⁸	7889—116 S. Road St.	Elizabeth City
Sparrow, Harry Ward, I ³²	3-6911—344 N. Elm St., Box U-3	Greensboro
Sparrow, Thomas DeLamar, (Hon.) S ⁵⁰	4-7244—1012 Kings Drive	Charlotte
Speas, Dallas Cleaborn, (Hon.) GP ²⁵	2-4282—2598 Reynolda Road	Winston-Salem
Speas, William Paul, (Hon.) Oph ²⁵	3-1041—324 Reynolds Bldg.	Winston-Salem
Speas, William Paul, Jr., GP ²⁵	4-0761—210 O'Hanlon Bldg.	Winston-Salem
Speers, Rex W., GP ¹³	2021	Claremont
Speight, James Ambler, (Hon.) Ret., GP ²⁴	827 Hillsboro St.	Rocky Mount
Spence, Julian, GP ²⁴	3431—P. O. Box 157	Macclesfield
Spencer, Benjamin Decatur, GP ⁵⁰	ED 2-0121—300 E. Blvd.	Charlotte 3
Spencer, Frederick Brunell, Sr., (Hon.) GP ⁶⁶	140—528 S. Fulton St.	Salisbury
Spencer, Frederick B., Jr., I ⁶⁶	2754—Medical Arts Bldg.	Salisbury
*Spencer, Richard Earl, Anes ³²	4-0121—1200 N. Elm St.	Greensboro
*Spencer, William Gear, Jr., ObG ⁷⁹	7-1182—301 West End Ave.	Wilson
Spicer, Richard Williams, (Hon.) Ob ²⁵	405 N. Spring St.	Winston-Salem
Sprinkle, Charles Nichols, (Hon.) GP ⁸	2211—P. O. Box 218, 104 N. Main St.	Weaverville
*Sprinkle, Lawrence Tilson, GP ¹⁷ and 8	2211—P. O. Box 218, 104 N. Main St.	Weaverville
*Sprunt, William Hutchinson, Jr., (Hon.) S ²⁵	2-1224—Bowman Gray School of Medicine	Winston-Salem
*Sprunt, William H., III, R ²³	9031—N. C. Mem. Hosp.	Chapel Hill
Spyker, Mitchell Alden, Path ¹	716 Nat. Bk. Bldg.	Lima, Ohio
*Squires, Claude Babbington, (Hon.) U ⁵⁰	ED 3-7101—403 N. Tryon St.	Charlotte
*Stallard, Sam Kane, GP ⁶⁵	9365—200 S. Main	Reidsville
Stallings, Durwood, Jr., PH ²⁶		Zehnlon
Stanfield, William Wesley, S ³⁴	Cotton-Dale Hotel Bldg.	Dunn
*Stanford, Lois Brooke Foote, (Hon.) Ed ²³	4-6431—111 Corcoran St.	Durham
*Stanford, William Raney, (Hon.) I ²³	4-6431—111 Corcoran St.	Durham
Stanley, John Haywood, (Hon.) GP ⁴¹		Four Oaks
Stanley, Sherburn Moore, I ⁸	200—P. O. Box 66	Enka
Stanton, Allie McLeod, S ¹⁶	692—Box 230, Chowan Hosp.	Edenton

*Present at 1955 meeting

Stanton, T. M., (Hon.) S ³²	.....	High Point
Starke, Helen, I ²³	Our Lady of Mary Knoll	.....
	Novitiate	Valley Park, Missouri
Starling, Howard Montfort, S ²⁵	3-1092—505 Reynolds Bldg.	Winston-Salem
*Starling, Wyman Plato, GP ⁶⁸	2171—Box 297	Roseboro
*Starr, Henry Frank, (Hon.) Ins ³²	3-6971—Jefferson Standard Life	.....
	Insurance Co.	Greensboro
Starr, H. Frank, Jr., I ³²	3-5591—Pilot Life Insurance Co.,	.....
	Box P	Greensboro
Stead, Eugene Anson, Jr., I ²³	9011—Duke Hospital	Durham
Stegall, John Thomas, GP ³⁹	3269—132 N. Tradd St.	Statesville
*Steiger, Howard Paul, D ⁵⁰	FR 6-1524—207 Hawthorne Lane.	Charlotte
Stephen, Charles Ronald, Anes ²³	9011—Box 3535, Duke Hosp.	Durham
Stephens, Freeman Irby, I ⁸	3-6745—305 City Hall Bldg.	Asheville
Stephens, Richard Samuel, I ¹⁰	6311—307 N. Riddle Ave	Kannapolis
*Stephenson, Bennett Edward, GP ⁵⁵	26—P. O. Box 206	Rich Square
*Sternbergh, Waldemar C. A., R ⁵⁰	ED 3-4480—Charlotte Mem. Hosp.	Charlotte
*Stevens, Herman D., I & T ³⁸	Aberdeen 9131—P. O. Box H	McCain
*Stevens, Joseph Blackburn, I & N ³²	4-1234—363 N. Elm St.	Greensboro
Stevens, William Leary, GP ⁵⁸	.....	Shiloh
*Stewart, Albert, Jr., I ²⁰	3-3915—114 Broadfoot Ave.	Fayetteville
Stewart, Daniel Niven, Jr., GP ¹³	4416—3 Third Ave., N. W.	Hickory
Stewart, John Reagan, OALR ³⁹	9086—David Hospital	Statesville
Stewart, Roy Allen, Oph ¹³	865—Catawba Hospital	Newton
*Stewart, Wm. Sinclair, IV, Or ⁵⁰	ED 2-2260—1012 Kings Drive	Charlotte 7
Stiff, A. Olin, GP ⁹	506 W. Quill Drive	San Antonio, Texas
*Stimpson, Robert Tula, GP ²⁵	2-2562—827 Nissen Bldg.	Winston-Salem
Stirewalt, Neale Summers, GP ³²	5234—118½ N. Main St., Box 1848	High Point
*Stockdale, Wayne H., S ⁴¹	3600—703 North Street	Smithfield
*Stocker, Frederick W., Oph ²³	2-2136—1110 W. Main St.	Durham
Stone, Marvin Lee, GP ²⁴	.....	Rocky Mount
Stoneburner, Richard G., S ¹	6-0400—441 S. Spring St.	Burlington
*Stovall, Horace Henry, S ³²	4-6805—1018 North Elm St.	Greensboro
*Stratton, James Davis, Oph ⁵⁰	ED 4-0663—1012 Kings Drive	Charlotte
Straughan, John William, GP ²²	P.O. Box 55	Warsaw
Street, Claudius Augustus, (Hon.) Pd ⁴⁵	3-2600—405 N. Spring St.	Winston-Salem
*Street, Murdo Eugene, Jr., GP ⁵³	.....	Glendon
Stretcher, Robert Hatfield, GP ³⁵	25 Church St.	Waynesville
Stricker, Robert L., GP ⁷²	TU 2-1241—15 E. Jordan St.	Brevard
*Strickland, Ernest Lee, (Hon.) GP ⁷⁹	6135—103 N. Pine St.	Wilson
Strickland, Horace Gilmore, OALR ³²	4-6334—101 N. Elm St.	Greensboro
Stringfield, James King, GP ³⁵	Glendale 6-3222—Main St., Box 347	Waynesville
Stringfield, Preston Calvin, Jr., I ⁷⁸	252—Wilkes Hospital	N. Wilkesbro
Stringfield, Thomas, Jr., GP ³⁵	Glendale 6-3222—Main St.	Waynesville
*Strobos, Robert J., Jr., N & P ²⁵	4-6361—Bowman Gray School	.....
	of Medicine	Winston-Salem
*Strosnider, Charles Franklin, (Hon.) I ⁷⁷	37—111 E. Chestnut St.	Goldsboro
Stroupe, Albertus Ula, Jr., GP ²⁷	220	Mount Holly
Stroupe, Matthew Alfred, Jr., I & GE ²⁷	7186—529 S. Chester St.	Gastonia
*Stuckey, Charles LeGrand, I ⁵⁰	ED 4-2754—1515 Elizabeth Ave.	Charlotte
*Styron, Charles Woodrow, I ⁷⁵	6307—615 St. Mary's St.	Raleigh
*Suggs, C. Ann Howard, Pd ⁶²	3318—317 Ridgecrest Rd.	Asheboro
*Sugioka, Kenneth, Anes ²³	9031—N. C. Memorial Hosp.	Chapel Hill
*Suiter, Wester Ghio, (Hon.) GP ³³	9346—6 West 4th St.	Weldon
*Suitt, R. Burke, P ²³	9011—Duke University	Durham
*Summerlin, Harry, GP ⁶⁹	108—203 Atkinson St.	Laurinburg
Summers, J. Dent, S ¹³	2-6131—420 N. Center St.	Hickory
Summerville, Walter Monroe, Path ⁵⁰	ED 2-0635—612 Professional Bldg.	Charlotte 2
*Sumner, Emmett Ashworth, S ³²	3665—649 N. Main St.	High Point
Sumner, Thomas W., (Hon.) GP ³⁶	.....	Fletcher
Sutter, Renzo Humberto, Path ⁷¹	1500—401 S. Main St.	Mt. Airy
*Sutton, Edward C., GP ⁶³	2671—104 S. Randolph St.	Rockingham
Sutton, Julian T., GP ³³	678-1—E. Tenth St.	Scotland Neck
Swain, Wingate Elwood, GP ⁵⁴	U. S. Naval Hosp.	.....
	Dept. of Orth.	Portsmouth, Va.
Swann, Cecil Collins, Oto ¹⁸	3-8761—706 Flatiron Bldg.	Asheville
Swann, Joseph Fuller, (Hon.) GP ¹⁰	5601—124 Bethpage Rd.	Kannapolis
*Swanton, Margaret C., Path ²³	9031—UNC School of Med.	Chapel Hill
Sweaney, Hunter McGuire, (Hon.) S ²³	8-1261—1200 Broad St.	Durham
Sweel, Alexander, P ²⁵	4-5622—1950 W. First St.	Winston-Salem
*Sweeney, Edgar Chew, Pd ⁵⁰	FR 5-5112—1425 Elizabeth Ave.	Charlotte
Swindell, Lewis Holmes, Jr., (Hon.) GP ⁵	165—420 Market St.	Washington
Sykes, Charlie Louis, GP ⁷¹	796—205 Rawley Ave.	Mt. Airy
Sykes, Ralph Judson, GP & R ⁷¹	797—205 Rawley Ave.	Mt. Airy
*Sykes, Rufus Preston, GP ⁶³	3351—134 Sunset Ave.	Asheboro
*Symington, John, GP ⁵³	3181—Seawell Bldg.	Carthage

*Present at 1955 meeting

Taliaferro, Richard McC., S ³²	3-7418—153 Bishop St.	Greensboro
Tally, Bailey Thomas, (Hon.) S ⁷⁰	443—Box 231, Tally-Smith, Clinic	Albemarle
*Tankersley, James William, (Hon.) S ³²	7324—823 N. Elm St.	Greensboro
Tannenbaum, Abraham Jack, I ³²	5-1667—1001 N. Elm St.	Greensboro
*Tanner, Kenneth S., Jr., S ⁶⁷	3364—Rutherford Hosp.	Rutherfordton
Tarry, James R., GP ³⁰	5664—503 College St.	Oxford
Tarry, William B., Jr., GP ³⁰	101 College St.	Oxford
Tarnasky, Ralph, GP ³	4051	West Jefferson
*Tate, Allen Denny, Jr., GP ¹	7467—214 N. Marshall St.	Graham
Tate, Lawson, S ¹	RE 4-2545—Grace Hosp.	Banner Elk
Tate, William Cummings, (Hon.) S ¹	Grace Hosp.	Banner Elk
Tatum, Roy Carroll, (Hon.) GP ³⁹	2571—Court House Square	Taylorsville
Taubenhaus, Leon Jair, GP ⁵⁴	37 Englewood Ave.	Brookline 46, Mass.
Tayloe, John Cotten, (Hon.) ObG ⁵	1336—120 Washington St.	Washington
Taylor, Allen, R ⁶⁰	5141—Pitt Mem. Hosp.	Greenville
*Taylor, Andrew DuVal, A ⁵⁰	ED 2-7731—1012 Kings Drive	Charlotte
*Taylor, Charles Whitfield, P ⁶⁶	6100—Vet. Admn. Hospital	Salisbury
Taylor, Erasmus Henry Evans, (Hon.) P ⁹	1200—Broadoaks Sanatorium	Morganton
Taylor, Frank Victor, OALR ¹⁵	Ph. 213—Murphy Gen. Hosp.	Murphy
*Taylor, Frederick H., S ⁵⁰	FR 6-6511—1012 Kings Drive	Charlotte
*Taylor, Frederick Raymond, (Hon.) I ³²	9460—1113 Johnson St.	High Point
Taylor, George Winston, (Hon.) S ³⁹	3-2611—417 Statesville Ave.	Mooreville
Taylor, Isaac Montrose, I & ED ²³	9031—Box 1165	Chapel Hill
Taylor, James A., I ²³	Ph. 9428—UNC Infirmary	Chapel Hill
Taylor, James Nathaniel, (Hon.) GE ³²	7246—105 E. Tremont Dr.	Greensboro
Taylor, Rives William, GP ³⁰	3078—Box 1191	Oxford
Taylor, Shahane Richardson, (Hon.) OALR ³²	4-4628—319 Jefferson Bldg.	Greensboro
*Taylor, Thomas Jefferson, GP ³³	7-4661—643 Roanoke Ave.	Roanoke Rapids
*Taylor, Vernon Williams, Jr., GP ⁷¹	338—Hugh Chatham Mem. Hosp.	Elkin
Taylor, William Jape, I ²³	8011—2016 Wilson St.	Durham
Taylor, William Ivey, Jr., GP ⁵⁴	152—Box 156	Burgaw
Taylor, William Louis, (Hon.) GP ³⁰	3344	Oxford
*Temple, Rufus Henry, I & C ⁴¹	4071—306 N. Queen St.	Kinston
Templeton, Ralph Gordon, GP ¹¹	PL 4-6471—Blackwelder Hosp.	Lenoir
Tharp, Donald W., GP ⁵⁸	124—Box 106	Buxton
Thaxton, Benjamin Adams, (Hon.) GP ⁵⁹	4003—111 Main St., Box 216	Roxboro
Thomas, Ben D., GP ⁷⁵	4501	Zebulon
Thomas, Charles Darwin, T ⁸	8411—Western N. C. Sanatorium	Black Mountain
*Thomas, Colin G., Jr., S ²³	9031—N. C. Memorial Hosp.	Chapel Hill
Thomas, James V., GP ⁶⁵	Main 3-7519—Box 426	Leaksville
Thomas, Julius Graham, (Hon.) GP ³²	122 S. Greene St.	Greensboro
*Thomas, Walter Lee, ObG ²³	Box 3705 Duke Hosp.	Durham
Thomas, William Nelson, (Hon.) S ³⁰	5842—Box 1191, Main St.	Oxford
Thomas, William Ralph, GP ⁵⁸	8155—Route 4, Box 106	Elizabeth City
Thompson, Alexander Frank, Jr., S ¹⁰	2186—Ardsley Rd.	Concord
Thompson, Charles Robert, S ¹¹	PL 4-5321—112 N. Boundary St.	Lenoir
*Thompson, Claude Durant, (Hon.) GP ³²	4-4312—809 Willowbar Terrace	High Point
Thompson, Clive Allen, GP ⁷⁸	51	Sparta
Thompson, Fred A., I ¹¹	PL 4-9053—351 S. Mulberry St.	Lenoir
*Thompson, George Richard Cunliffe, GP ⁵¹	2-1346—407 Murchison Bldg.	Wilmington
*Thompson, Heyward Chevis, GP ¹⁷	6911—Box 202	Shelby
Thompson, Hugh Alexander, (Hon.) Or ⁷⁵	8331—309 Hillsboro St.	Raleigh
Thompson, Joseph, (Hon.) GP ³⁰	3421	Creedmoor
*Thompson, Lloyd James, P ²⁵	4-6361—Bowman Gray School of Medicine	Winston-Salem
Thompson, Sanford Webb, Jr., (Hon.) GP ¹²	6-4039—103 S. 11th St.	Morehead City
Thompson, Silas Raymond, (Hon.) U ⁵⁰	2-0443—240 Cherokee Rd.	Charlotte
Thompson, Walter Lee, Jr., GP ²⁵	2-3513—310 W. Fourth St.	Winston-Salem
Thompson, William Nelson, GP ⁷⁵	2-3779—724 St. Mary's St.	Raleigh
Thompson, Winfield Lynn, S ⁷⁷	59—809 Simmons St.	Goldsboro
Thorne, Silas Owens, Jr., OALR ¹²	Ph. 6-3308—101 S. 11th St.	Morehead City
*Thornhill, Edwin Hale, OALR ⁷⁵	4-7341—720 W. Jones St.	Raleigh
Thornhill, George Tudor, OALR ⁷⁵	4-7341—720 W. Jones St.	Raleigh
Thorp, Adam Tredwell, (Hon.) ObG ²¹	2-4134—410 Peachtree St.	Rocky Mount
Thorp, Lewis Summer, I ²⁴	2-2075—Park View Hosp.	Rocky Mount
Thurston, Asa, (Hon.) GP ³⁹		Taylorsville
*Thurston, Thomas G., R ⁶⁶	4136—512 Mocksville Ave.	Salisbury
*Tice, Walter Thomas, I ³²	8912—649 N. Main St.	High Point
Tidler, James, I ⁵¹	3-1611—306 N. 11th St.	Wilmington
Tillett, Charles W., Oph ⁵⁰	FR 6-7053—1511 Scott Ave.	Charlotte
Tillett, Grace M., R ⁵⁰	FR 6-7053—1511 Scott Ave.	Charlotte
Todd, Lester Claire, (Hon.) A ⁵⁰	ED 2-7731—1012 Kings Drive	Charlotte
Tolson, James M., GP ⁷⁴	238 Orange St.	Henderson
Townsend, Maurice Lyndon, (Hon.) Ret., P ⁵⁰		Society Hill, S. C.
Trachtenberg, William, GP ⁷⁷	1838—Borden Bldg.	Goldsboro
Trevathan, G. Earl, Pd ⁶⁰	6756—Falkland Rd.	Greenville

Trigg, William White, Jr., GP ⁶⁵	216 S. Main St.	Reidsville
Triplett, William Romulus, (Hon.) GP ⁷⁸		Purlear
Trivette, Parks Dewitt, Pd ¹³	3163—12 Second Ave., N. E.	Hickory
Trotter, Fred Oscar, S ³⁶	4828—5th Ave. Clinic	Hendersonville
Troutman, Baxter Suttles, GP ¹¹	PL 4-4211—Dula Hospital	Lenoir
*Troutman, Belk Conner, GP ⁶⁰	222-1—Box 428, 113 Pitt St.	Grifton
*Troxler, Eulyss Robert, Or ³²	3-7173—1000 N. Elm St.	Greensboro
Troxler, Raymond Moody, (Hon.) GP ¹	Box 107	Burlington
*Truslow, Roy Earl, R ⁶⁵	3321—618 S. Main St.	Reidsville
*Tufts, Emily, Pd ⁵³	2021—Harvard Bldg.	Pinehurst
*Tuggle, Allan Davis, R ⁵⁰	4-5531—2335 Forest Drive	Charlotte 7
Turlington, William Troy, Jr., GP ⁵⁶	7588—21 New Bridge St., Box 206	Jacksonville
Turner, Henry Gray, (Hon.), Ret., S ⁷⁵		Point Harbor
*Turner, Larry, OALR ²³	2-2139—1110 W. Main St.	Durham
*Turner, Violet Horner, ObG ²³	9011—Box 3503, Duke Hosp.	Durham
Turrentine, Kilby Pairo, I ⁴¹	3992—400 Glenwood Ave.	Kinston
*Tuttle, J. G., ⁷⁰		Albemarle
*Tuttle, Marler Slate, GP ¹⁰	5641—201 Prof. Bldg.	Kannapolis
Tuttle, Reuben Gray, (Hon.) GP ²⁵	2-4932—201 O'Hanlon Bldg.	Winston-Salem
Tyler, Earl Runyon, D ²³	8-0081—P.O. Box 427, 1200 Broad St.	Durham
*Tyndall, Robert Glenn, S ⁴⁴	2174—Parrott Hosp.	Kinston
*Tyner, Carl Vann, (Hon.) S ⁶⁵	MA 3-36281—201 N. Henry St.	Leaksville
Tyner, Hugh Edward, S ²⁷	9432—406 S. Chester St.	Gastonia
*Tyner, Kenneth V., S ²⁵	4-4728—626 Nissen Bldg.	Winston-Salem
Tyroler, Herman A., I & Ind ⁸	6442—247 Charlotte St.	Asheville
†Tyson, John J., S ²³	V.A. Hosp.	Durham
Tyson, Thomas David, Sr., (Hon.) GP ¹		Mebane
Tyson, Thomas David, Jr., ObG ³²	5404—649 N. Main St.	High Point
Tyson, Woodrow Wilson, I ³²	3003—641 N. Main St.	High Point
*Ulloth, Gustave, GP ³⁶	Arden 3911	Fletcher
Umphlet, Thomas Leonard, I ⁷⁵	4-4303—119 N. Boylan Ave.	Raleigh
Upchurch, Thaddeus Gilbert, ObG ⁴¹	2865—Upchurch Pharmacy Bldg.	Smithfield
Valk, Arthur DeTalma, (Hon.) S ²⁵	2-0408—Bowman Gray School	
Valk, Henry Lewis, I ²⁵	of Medicine	Winston-Salem
Valone, James Austin, PI ⁷⁵	4-6361—Bowman Gray School	
Vance, Shelby William, GP ⁴⁷	of Medicine	Winston-Salem
*Van-Gorder, Charles Oscar, S ¹⁵	Ph. 3-3102—2107 Clarke Ave.	Raleigh
*Van Hoy, Joe Milton, S ⁵⁰	3521	Marshall
Vann, Junius Richardson, (Hon.) GP ²⁴	126—Rodda-Van Gorder Hosp.	Andrews
Vann, Robert L., Pd ²⁵	ED 4-7244—1012 Kings Dr.	Charlotte 7
	332-1—P.O. Box 86	Spring Hope
	4-6361—Bowman Gray School	
*Vanore, Andrew Albert, GP, Ind & T ⁵³	of Medicine	Winston-Salem
Varner, John Wesley, PH ²¹	3231—Box 458	Robbins
*Vatz, Benjamin, I ³²	2278—C/o Davidson Co. Health Dept.	Lexington
Vaughan, Edwin Warner, I ³²	5-1667—1001 N. Elm St.	Greensboro
Vaughan, Roland Harris, GP ¹⁶	3-6911—342 N. Elm St.	Greensboro
Vaughan, Walter Weddle, R ²³	214—Citizens Bank Bldg.	Edenton
Velsor, Harry Van, D ⁵⁴	8-1286—731 Broad St.	Durham
*Venning, William Lucas, Jr., Pd ⁵⁰	5207—920 Grace Street	Wilmington
*Verdery, William Carey, (Hon.) Pd ²⁰	FR 5-1441—1901 E. Fifth St.	Charlotte 4
*Verdone, George F., I ⁵⁰	2-4216—104 Highland Ave.	Fayetteville
*Verhoeff, Dirk, Pd & T ³⁸	FR 7-4578—1012 Kings Drive	Charlotte
Verner, Carl Hugh, GP ⁶⁷	Mecklenburg Co. Sanatorium	Huntersville
Verner, Hugh David, I ⁵⁰	2211—224 W. Main St.	Forest City
Vernon, James Taylor, P ⁹	FR 6-4424—1361 E. Morehead Street	Charlotte
†Vernon, James William, (Hon.) P ⁹	1200—Broadoaks Sanatorium	Morganton
	1200—Broadoaks Sanatorium,	
	210 Valdese Ave.	Morganton
Vernon, William Chester, GP ⁸	2-6442—247 Charlotte St.	Asheville
Viser, Edward Taylor, GP ³³	7-2581—600 Jackson St.	Roanoke Rapids
Vollmer, Donald H., I ⁸	5673—212 New Med. Bldg.	Asheville
Vosburgh, George S., Jr., GP ⁶¹	457—Box 1486	Tryon
*Wadsworth, George H., S ³⁷	2244—Colony Ave.	Ahoskie
Wadsworth, Harvey Bryan, (Hon.) ObG ¹⁹	4414—517 Broad St.	New Bern
Waggoner, Lonnie A., Jr., I ²⁷	4-1431—212 West Second Ave.	Gastonia
Walden, Burt M., GP ⁶¹	5015—Box 37	Landrum, S. C.
Walden, Kennon Christian, S ⁵⁴	2-3976—A.C.L. General Office	Wilmington
Walker, Elmer Pixley, Ob ⁵⁴	4377—1624 Princess St., Bulluck Hosp.	Wilmington
Walker, Ernest Thayer, R ³²	4-3070—122 S. Greene St., Box 1004	Greensboro
Walker, Harry Gordon, GP ³⁹	3269—132 N. Trade St.	Statesville
*Walker, John Barrett, Jr., GP ¹	2649—Bailey-Coble Bldg.	Burlington
Walker, Louis Kyle, (Hon.) GP ³⁷	3217—P.O. Box 347, Main St.	Ahoskie

*Present at 1955 meeting

†Deceased

Walker, Robert Jeffreys, Jr., PH ²¹	2-1189—1616 West Thomas St.	Rocky Mount
*Walker, T. E., Pd ⁵⁰	ED 4-8935—1529 Elizabeth Ave.	Charlotte
*Walker, William Thomas, GP ²⁵	2101—Pinnix Bldg.	Kernersville
Wall, George Ritchie, GP ⁷⁰	1016—Hill Bldg.	Albemarle
Wall, Roger Irving, OALR ⁷⁵	5684—329 Prof. Bldg.	Raleigh
*Wall, Roscoe LeGrand, (Hon.) Anes ²⁵	4-6361—Bowman Gray School of Medicine.	Winston-Salem
Wall, Roscoe L., Jr., ObG ²⁵	4-0621—405 N. Spring St.	Winston-Salem
Wall, William Stanley, Ob ²¹	6-4952—132 Coast Line St.	Rocky Mount
Waller, Louis Clinton, GP ⁸	8341—1055 Haywood Rd.	Asheville
Wallin, Loren, PH ³²	6411—9336 Montlieu	High Point
Walters, H. Grover, S ⁶⁰	U. S. Naval Hospital.	Charleston, S. C.
Walton, Cyrus Leslie, GP ⁹	Morganton 911J—Box 26	Glen Alpine
*Wampler, Fred Jacob, PH ³⁰	5611—Health Dept.	Oxford
Wannamaker, Edward Jones, Jr., (Hon.) Ret., I ⁵⁰	RFD 3, Box 250	Charlotte
*Ward, D. Ernest, Jr., S ⁶¹	6912—403 Scottish Bank Bldg.	Lumberton
*Ward, Ernest, PH ³⁰	5621—Box 1268	Statesville
*Ward, Frank Pelouse, I ⁶¹	6611—501 W. 27th St., Box 696	Lumberton
Ward, Ivie Alphonso, (Hon.) OALR ¹⁶	2686—Box 315	Hertford
Ward, Joseph Major, GP ⁴⁸	2171—Box 182, Main St.	Robersonville
Ward, Vernon Albert, (Hon.) GP ⁴⁸	2171—Box 182, Main St.	Robersonville
Ward, Wallace Clyde, GP ⁷⁵	3-0088—231 Bryan Bldg.	Raleigh
Ward, Walter Elliott, GP ⁴⁸	2171—The Ward Clinic	Robersonville
*Ward, William Titus, GP ⁷⁵	8425—304 Prof. Bldg.	Raleigh
Ware, Norma, Pd ²⁵	2812 Reynolda Rd.	Winston-Salem
Warner, Willis Arden, ³⁹	Davis Hospital.	Statesville
Warren, Joseph Benjamin, GP ⁵⁷	74-1	Oriental
Warren, Robert Franklin, (Hon.) GP ¹		Prospect Hill
*Warrick, Luby Albert, (Hon.) GP ⁷⁷	1999R4—Grantham Village.	Goldsboro
Warshauer, Samuel Edward, I ⁵¹	2-8171—301 N. 10th St.	Wilmington
*Warwick, Hight Claudius, Anes ³²	2-0116—338 N. Elm St.	Greensboro
Washburn, Benjamin Earl, (Hon.) Ret., PH ⁶⁷	3241—219 S. Ridgecrest Ave.	Rutherfordton
*Washburn, Willard Wyan, GP ¹⁷	Lattimore 2281	Boiling Springs
Wassink, William Klein, GP ⁵⁸	Eliz. City 6661	Shiloh
Watkins, Carlton G., Pd ⁵⁰	FR 5-1441—1901 East Fifth St.	Charlotte
Watkins, Ralph M., I ²³	9428—121 Infirmary, UNC	Chapel Hill
Watkins, William Merritt, (Hon.) GP ²³	4-7921—503 Trust Bldg.	Durham
*Watson, George A., Pd ²³	6787—306 S. Gregson St.	Durham
Watson, Hugh Alfred, S ³²	3-1746—420 Jefferson Bldg.	Greensboro
Watson, John William, GP ³⁰	501 Hillsboro St.	Oxford
*Watters, John L., GP ⁶⁰	4591—109 Penn. Avenue	Greenville
*Watters, Vernon Gregg, Jr., S ⁶³	5211—303 Leak St.	Rockingham
Watts, Walter M., Or ⁸	3-3573—5 Ravenscroft Drive	Asheville
Way, John E., S ¹²	2-4176	Beaufort
Way, Samuel Eason, S ²⁴	6-8126—224 Rose St.	Rocky Mount
*Wear, John E., R ⁶⁶	4136—512 Mocksville Ave.	Salisbury
Weathers, Bahnson, (Hon.) S ³³	7-6711—705 Roanoke Ave., P.O. Box 308	Roanoke Rapids
Weathers, Bailey Graham, GP ²⁷	Box 246	Stanley
*Weathers, Rupert Ryan, GP ⁷⁵	3-2919—Box 187	Knightdale
*Weaver, R. G., Oph ²⁵	4-6361—Bowman Gray School of Medicine.	Winston-Salem
Weaver, William Jackson, (Hon.) GP ⁸	Leicester 2141—Rt. 4	Asheville
*Webb, Alexander, Jr., S ⁷⁵	2-4018—221 Bryan Bldg.	Raleigh
Webb, Bailey, Pd ²³	6-4531—809 W. Chapel Hill St.	Durham
*Webb, Herbert F., GP ¹²	611—Sealevel Community Hosp.	Sealevel
Webb, Melvin Walter, GP ⁵¹	36—Webb Clinic.	Burnsville
Weeks, John F., GP ⁵⁸	5471—Med. Bldg.	Elizabeth City
Weeks, Kenneth Durham, I ²⁴	2-1666—1605 W. Thomas St.	Rocky Mount
Weinstein, Rayford Lee, GP ⁶¹	2921—111 Jenkins St.	Fairmont
Weir, A. Frank, GP ⁶⁷	Box 278	Cliffside
Weizenblatt, Sprinza, Oph ⁸	7151—709 New Med. Bldg.	Asheville
Welborn, James Todd, GP ²¹	3955—15 E. Second Ave.	Lexington
Welborn, Julius Warren, Jr., GP ⁶¹	462—Box 1323	Tryon
Welfare, Charles Randall, I ²⁵	3-7111—424 Nissen Bldg.	Winston-Salem
*Wells, Edwin Julius, PI ⁵⁴	3-7617—504 Murchison Bldg.	Wilmington
Wells, Helen Lewis, GP ¹⁵	28—Petrie Hosp.	Murphy
*Wells, Warner L., S ²³	9031—UNC Sch. of Med.	Chapel Hill
Welt, Louis Gordon, I & ED ²³	9031—UNC Sch. of Med.	Chapel Hill
*Welton, David Goe, D ⁵⁰	ED 3-9696—403 N. Tryon St.	Charlotte
*Wentz, Irl J., Or ⁶⁶	5802—Med. Arts Bldg.	Salisbury
Wessell, John Charles, (Hon.) Ret., I ⁵⁴	5148—1501 Market St.	Wilmington
West, Bryan Clinton, GP ¹⁴	3787—113 E. Gordon St.	Kinston
West, Clifton Forrest, (Hon.) I ¹⁴	3066—107 E. North St.	Kinston
West, Louis Nelson, (Hon.) Ret., OALR ⁷⁵	Holly Hill	Raleigh
*Wester, M. W., Jr., GP ⁷⁴	7016—520 S. Chestnut St.	Henderson

*Wester, Thaddeus Bryan, Pd ⁶⁴	3318—Medical Arts Bldg.	Lumberton
Westmoreland, Joseph Robert, GP ³⁵	2800—Med. Bldg.	Canton
Whaley, James Davant, U ¹³	2-6131—420 N. Center St.	Hickory
Whaley, John Lambdin, I ²⁴	2166—300 St. Patrick's St., Tarboro Clinic	Tarboro
Wharton, Charles Watson, GP ¹¹	2550—7-A Thornton Bldg.	Smithfield
Wheeler, James Hartwick, (Hon.) GP ⁷⁴		Henderson
Wheeler, Raymond Milner, I ⁵⁰	ED 4-9701—1320 Scott Ave.	Charlotte
Wheless, James Block, GP ²⁶	352-1—S. Market St.	Louisburg
Wheless, Thomas O., GP ²⁶	375-1—S. Market St.	Louisburg
Whicker, Guy Lorraine, GP ¹⁰	5641—201 Prof. Bldg.	Kannapolis
Whicker, Max Evans, GP ⁶⁶	101—103 S. Main St., Box 506	China Grove
*Whims, Harold Carter, PH ⁶²	4227—139 North Cox St.	Asheboro
Whisnant, Albert Miller, (Hon.), Ret., OALR ⁵⁰	2-4801—Rt. 2 Park Rd.	Charlotte
Whisnant, Charles L., Jr., I ³²	113 Price St.	Greensboro
Whitaker, Donald N., GP ⁷⁵	4-0341—700 W. Morgan St.	Raleigh
*Whitaker, James Allen, U ²⁴	2-5121—144 Coast Line St.	Rocky Mount
*Whitaker, Paul Frederick, (Hon.) I ⁴⁴	1205 N. Queen St.	Kinston
*Whitaker, Richard Harper, GP ²⁵	5201—120 N. Cherry St., Box 1136	Kernersville
White, Clarence Hunt, OALR ⁷⁴	3348—230 Orange St.	Henderson
White, Edward R., I ²⁵	3-2440—712 O'Hanlon Bldg.	Winston-Salem
*White, Estus, GP ¹⁰	9701—301 Prof. Bldg., Box 1025	Kannapolis
*White, Francis Willard Moody, (Hon.) GP ³³	201—Box 545	Halifax
*White, Hayes MacM., Jr., S ⁶²	6225—147 McArthur St.	Asheboro
White, Kerr Lachlan, I ²³	9031—N. C. Memorial Hospital	Chapel Hill
White, Phillip Fletcher, GP ⁶³	104 S. Randolph St.	Rockingham
White, Robert Alexander, (Hon.) ObG ⁸	8911—23 Flint St.	Asheville
White, Thomas Preston, I ⁵⁰	ED 4-1649—211 Hawthorne Lane	Charlotte
*White, William Elliott, Pd ⁵⁰	ED 4-0891—1012 Kings Dr.	Charlotte
*Whitehead, Seba L., (Hon.) D ⁸	2-3331—508 Public Service Bldg.	Asheville
Whitener, Donald Leonard, ObG ²⁵	5017th ASU U.S. Army Hosp.	Ft. Leonard Wood, Missouri
Whitesides, William Carl, Jr., I ⁵⁰	ED 4-1416—1515 Elizabeth Ave.	Charlotte 4
Whitfield, Bryan Watkins, GP ¹⁵	17—Murphy Gen. Hosp.	Murphy
*Whitley, Robert Macon, Jr., I ²⁴	2-5121—144 Coast Line St.	Rocky Mount
Whitt, Walter Fulton, Jr., GP ⁷³	DT 3-3421—111 S. Haynes St., Box 446	Monroe
Whittington, Claude Thomas, S ³²	2-5021—Med. Arts Bldg.	Greensboro
Whittington, James Benbow, (Hon.) Hosp Ad ²⁵	P.O. Box 2954	Winston-Salem
Widenhouse, Martin Aubrey, GP ¹⁰	5202—307 Cannon Bldg.	Concord
Wiggins, John Carroll, Jr., I ²⁵	4-8394—415 N. Spring St.	Winston-Salem
*Wilhoit, Robert M., GP & Ind ⁶²	2265—514 S. Fayetteville St.	Asheboro
Wilkerson, Annie Louise, ObG ⁷⁵	2-7922—100 S. Boylan Ave.	Raleigh
Wilkerson, Charles B., Jr., I ⁷⁵	4-1051—100 S. Boylan Ave.	Raleigh
Wilkerson, Jess Bert, (Hon.) GP ⁷²	2-5171—P.O. Box 682, 12 W. Main St.	Brevard
Wilkes, Grover, (Hon.) GP ⁴⁰	90J—Hooper Bldg.	Sylva
*Wilkins, Java Cleveland, (Hon.) GP ¹	6-0965—Haw River Pharmacy Bldg.	Haw River
Wilkins, Kenneth, ObG ⁷⁷	2104—210 N. Herman St.	Goldsboro
*Wilkins, Robert Bruce, (Hon.) OALR ²³	3-9861—123 W. Main St., Box 1130	Durham
Wilkins, Samuel A., Sr., (Hon.) Ret., GP ²⁷	Dearborn 6044—1196 Springdale Rd., N. E.	Atlanta 6, Ga.
*Wilkinson, Charles Tolbert, (Hon.) GP ⁷⁵	4261—205 Waite St., Wilkinson Bldg.	Wake Forest
Wilkinson, James Spencer, D ⁷⁵	6044—618 Prof. Bldg.	Raleigh
Wilkinson, Louis Lee, S ³²	9331—631 N. Main St.	High Point
Wilkinson, Robert Watson, Jr., (Hon.) GP ⁷⁵	2741—Box 409, 205 Waite St.	Wake Forest
Will, Thomas Augustine, GP ²⁷	4-1567—Box 1189	Dallas
*Willcox, Jesse Womble, (Hon.) PH ⁵³	2231—Box 245, Health Dept.	Carthage
Willlett, Robert W., I ⁷⁵	2005 Clark Avenue	Raleigh
Williams, Charles Frederick, Pd ⁷⁵	3-5711—817 Hillsboro St.	Raleigh
Williams, Jabez H., (Hon.) I & T ⁸	339—V.A. Hosp.	Oteen
*Williams, Jerome Otis, Path ¹⁰	2247—Cabarrus County Hosp.	Concord
Williams, John Drevey, (Hon.) GP ³²	Guilford Station	Greensboro
Williams, John Dudley, Jr., ObG ³²	3-3150—127 Stafford Place	Greensboro
Williams, Kenan, Pd ²⁵	3-3230—207 S. Hawthorne Rd.	Winston-Salem
Williams, Leonidas Polk, (Hon.) GP ¹⁶	133—108 E. King St.	Edenton
*Williams, Lynwood Earl, I & T ⁴⁴	2472—Kinston Clinic	Kinston
*Williams, Marguerite Lanzenby, Pd ¹⁰	2-7961—Ardsley Rd.	Concord
*Williams, McChord, S ⁵⁰	FR 5-3321—211 Hawthorne Lane	Charlotte
Williams, R. Bertram, Jr., S ⁵⁴	3-2251—308 N. 3rd St.	Wilmington
Williams, Robert, R ⁷⁵	9748—127 W. Hargett St.	Raleigh
Williams, Robert W., S ⁵⁴	2-1533—1007 Murchison Bldg.	Wilmington
Williams, Roderick Thomas, GP ⁶⁰	3550—122 N. Main St.	Farmville
Williams, Samuel Clay, I ²⁵	8985—1503 Reynolds Bldg.	Winston-Salem
Williams, Samuel Hodges, Jr., S ⁵	1335—120 Washington St.	Washington
Williams, Thomas Richard, Jr., GP ¹³	3-6386—130 N. Center St.	Hickory
Williams, Trevor G., GP ⁶⁷	2856—Rutherfordton-Charlotte Hwy.	Forest City
Williamson, Rossie Marshall, GP ¹⁸	2081—23 West 5th St., Box 497	Tabor City
Williford, John Kenneth, GP ³⁴	3921—Box 487	Lillington

Willis, Byrd Charles, (Hon.) Ret., S ²¹	Box 231	Orange, Virginia
Willis, Candler Arthur, S ⁸	200—Box 289	Enka
Willis, Carroll Vance, GP ¹⁹	357—Box 248, New Street	Vanceboro
Willis, Harry C., (Hon.) OALR ⁷⁹	2461—Willis Bldg.	Wilson
*Willis, Henry Stuart, I & T ²³	9023—N. C. Sanatorium	Chapel Hill
Willis, Robert Fredrick, GP ²²	2771—Box 248	Kenansville
*Willis, Tom Vann, S ⁷⁸	89—Alleghany Co. Mem. Hosp.	Sparta
Willis, William Henry, Jr., GP ¹⁹	2474—Box 69	New Bern
Wilsey, John Derrick, III, Oph ²⁵	3-1284—310 W. 4th St.	Winston-Salem
Wilson, Clarence L., (Hon.) GP ¹¹	Plaza 4-6985—212 N. Main St.	Lenoir
Wilson, Franklin LeRoy, GP ⁵⁰	5-4724—1700 Mecklenburg Ave.	Charlotte 5
*Wilson, George Darwin, PMR ⁸	2-1441—308 City Bldg.	Asheville
*Wilson, Hadley M., GP ³	AM 4-3881—711 E. King St.	Boone
*Wilson, James Stephenson, S ²³	8-1261—1200 Broad St.	Durham
*Wilson, John Knox, Pd ³²	4-0106—1209 Magnolia St.	Greensboro
Wilson, Margaret, S ⁷⁵	6954—510 Prof. Bldg.	Raleigh
Wilson, Roebry Bryant, Anes ⁸	7931—Flatiron Bldg.	Asheville
Wilson, Samuel Allen, S ¹⁵	RE 5-7421—410 S. Aspin St.	Lincolnton
Wilson, Stephen Glenn, GP ³⁴	3312—Box 513	Angier
*Wilson, Thomas Barnette, Path & CP ⁷⁵	Rex Hospital	Raleigh
*Wilson, Walter Howard, I ⁷⁵	4-4301—403 Prof. Bldg.	Raleigh
Wilson, William Gilliam, (Hon.) GP ⁴¹	Box 296	Smithfield
Wilson, William P., P ²³	V. A. Hosp.	Durham
Winborne, Roger M., Jr., I (Hosp Res.) ²³	9031—N. C. Memorial Hosp.	Chapel Hill
Winkler, Harry, Or ⁵⁰	ED 4-4641—1500 Elizabeth Ave.	Charlotte 2
Winstead, Ellis Grey, GP ⁵	Ph. 334-1—Guaranty Bk. Bldg.	Belhaven
*Winstead, John Lindsay, S ⁶⁰	4131—1001 E. Fourth St.	Greenville
Winston, Patrick Henry, GP ³⁰	Box 213	Clarksville, Va.
*Winter, Frank Counsel, Oph ²³	5645 Royal Oak Rd.	Encino, Calif.
*Wise, Fred E., Jr., R ⁵⁰	ED 4-5531—412 N. Church St.	Charlotte
Wisely, Martin Robert, GP ¹⁶	214—Box 103, Citizens Bank Bldg.	Edenton
Wiseman, Perry Haynes, GP ⁶⁷	Caroleen 5151	Avondale
*Withers, William Alphonso, I ⁷⁵	2-3940—16 N. Dawson St.	Raleigh
Witten, Ernest R. S., I & T ⁸	3-5707—614 City Hall Bldg.	Asheville
*Wolfe, Harold Eugene, D ⁷⁷	216—137 W. Walnut St., Box 864	Goldsboro
Wolfe, Hugh Claibourne, (Hon.) OALR ³²	2-5930—100 Wolfe Med. Bldg.	Greensboro
Wolfe, Nathan Carl, GP ⁵¹	153	Burgaw
Wolfe, Ralph Verlon, S ²⁵	119 Marshall Street, S. W.	Winston-Salem
Woltz, John H. Early, ObG ⁵⁰	ED 2-8579—1509 Elizabeth Ave.	Charlotte
Womack, Nathan A., S ²³	9031—UNC Sch. of Med.	Chapel Hill
*Womble, Edwin Cornelius, GP ⁶⁹	461—Box C	Wagram
*Wood, Ernest H., R ²³	9031—N. C. Mem. Hosp.	Chapel Hill
Wood, Frank, S ¹⁶	692—Chowan Hosp.	Edenton
*Wood, George Thomas, Jr., S ³²	5451—330 Locke St.	High Point
Wood, Hagan Emmett, T ⁸	8411—Western N. C. Sanatorium	Black Mountain
Wood, Sherrod Newberry, GP ³³	5371	Enfield
Wood, William Lupton, GP ⁷¹	2821—P.O. Box 96	Yadkinville
*Wood, William Reed, ObG ³²	2-6137—344 N. Elm St.	Greensboro
Woodard, Albert Gideon, (Hon.) Oph ⁷⁷	682—Box 423	Goldsboro
Woodard, Barney Lelon, GP ⁴¹	2251—Box 128	Kenly
*Woodard, Marshall Wayne, Oph ⁸	7416—517 Flatiron Bldg.	Asheville
Woodbridge, C. L., OALR ⁴		Banner Elk
Woodburn, Clark Harold, GP ³³	2291	Littleton
Woodhall, Maurice Barnes, NS ²³	9011—Duke Hosp.	Durham
Woodruff, Fred Gwyn, (Hon.) GP ³²	9324—641 N. Main St.	High Point
Woodruff, William Egleston, S ⁶²	USS Boxer, C/o FPO	San Francisco, Calif.
*Woods, James Baker, Jr., GP ⁵⁰	2651—230 South St., Box 157	Davidson
Woods, James Watson, Jr., I & Ed ²³	9031—UNC Sch. of Med.	Chapel Hill
Woody, John Wycliffe Austin, GP ⁶¹	374—Box 1111	Tryon
Wooten, Cecil W., Jr., GP ⁴⁴	3496—Kinston Clinic	Kinston
Wooten, Jane Herring, Pd ⁷⁵	3-5711—817 Hillsboro St.	Raleigh
Wooten, John L., Or ⁶⁰	4613—416 Greene St.	Greenville
Worden, Neil, GP ²⁰	2-9119—Hope Mills Gen. Hosp.	Hope Mills
Worley, James Harr, S ⁸	2-6126—302 City Hall Bldg.	Asheville
*Worth, Thomas Clarkson, R ⁷⁵	6064—Rex Hospital	Raleigh
*Wrenn, Creighton, S ³⁹	3-2131—435 Statesville Ave.	Mooreville
Wrenn, Grover Cleveland, OALR ¹⁴	359—229 E. Raleigh St.	Siler City
Wright, Charles Newbold, GP ⁵⁸	2146—Box 126	Jarvisburg
Wright, Isaac Clark, I ⁷⁵	4-4303—119 N. Boylan Ave.	Raleigh
Wright, James Rhodes, OALR ⁷⁵	Ph. 4-8251—604 Professional Bldg.	Raleigh
Wright, James T., GP ⁵	3751	Belhaven
Wright, John Bryan, (Hon.) OALR ⁷⁵	8846—604 Prof. Bldg.	Raleigh
*Wright, John Everett, GP ⁷⁹	7-1121—E.N.C. Sanatorium	Wilson
*Wright, John Joseph, PH ²³	9423—School of Public Health of UNC	Chapel Hill
Wright, Orpheus Evans, GP ²⁵	2-5234—126 E. Sprague St.	Winston-Salem
*Wright, Richard B., Jr., GP ⁶⁶	3278—Box 507	Salisbury

Wright, Samuel Martin, Pd ²⁰	2-5161—1606 Morganton Rd.	Fayetteville
*Wright, Thomas Hasel, Jr., P ⁵⁰	ED 4-1656—Doctors Bldg.	Charlotte
*Wyatt, Wortham, (Hon.) D ²⁵	2-2345—403 Reynolds Bldg.	Winston-Salem 3
*Wyche, Joseph Thomas, GP ¹⁸	2706—615 S. Madison St.	Whiteville
Wylie, William DeKalb, I ²⁵	4-9111—702 Wachovia Bank Bldg.	Winston-Salem
*Yarborough, Frank Ray, GP ⁷⁵	2281—105 E. Park St., Box 398	Cary
Yates, Percy Fenton, GP ⁴¹	3201—221 S. Barbour St.	Clayton
Yelton, Ernest H., GP ⁶⁷	Box 589	Rutherfordton
Yeomans, M. B., GP ¹⁷	2-1231—Lineberger Bldg.	Shelby
York, Alexander Arthur, (Hon.) GP ³²	9021—Route 1	High Point
*Young, Cabell, Or ²⁵	4-6361—Baptist Hospital	Winston-Salem
*Young, David Alexander, PN ⁷⁵	4-0821—714 St. Mary's St.	Raleigh
Young, John Clingman, U ⁸	2-6041—403 Flatiron Bldg.	Asheville
Young, John Paul, I ⁸	3-8180—180 Biltmore Ave.	Asheville
Young, Joseph A., GP ¹³	824—311 N. Main Ave.	Newton
*Young, Robert Foster, PH ³³	191—Halifax Co. Health Dept.	Halifax
Young, William B., ⁷⁹	Carolina General Hospital	Wilson
Youngblood, Vernon Hinson, U ¹⁰	5106—Rt. 8 Kannapolis-	
	Concord Highway	Concord
*Yount, Ernest Harshaw, Jr., I ²⁵	4-6361—Bowman Gray School	
	of Medicine	Winston-Salem
Yow, Daniel Eugene, I ¹⁰	5155—325 S. Union St.	Concord
Zealy, Albert Hazel, Jr., GP ⁷⁷	646—100 S. James Street	Goldsboro

Present at 1955 meeting

SPECIAL INTERN-RESIDENT MEMBERSHIP

By authority of the House of Delegates this special class of membership is established with no requirement of county society membership, although county society membership will be permissive.

This membership is limited in tenure to the period of official intern or residency training in a hospital located in North Carolina which has been approved by the American Medical Association for intern-residency training. This class of membership will expire immediately upon completion of internship or residency training in a North Carolina hospital.

D. E. MacDonald, Hosp Res 107½ Plant Road Chapel Hill

KEY TO SPECIALTIES

A—Allergy	Hosp Res—Hospital	Otol—Otology
Anes—Anesthesiology	Resident	Pl—Plastic Surgery
ALR—Otolaryngology,	I—Internal Medicine	P—Psychiatry
Rhinology	Ind—Industrial Practice	PN—Psychiatry, Neurology
Bact—Bacteriology	Ins—Insurance	Path—Pathology
C—Cardiovascular Disease	N—Neurology	Pd—Pediatrics
CP—Clinical Pathology	NS—Neurological Surgery	PH—Public Health
D—Dermatology	OALR—Ophthalmology,	Phar—Pharmacology
Ed—Medical Education	Otology,	PMR—Physical Medicine
Endoc—Endocrinology	Rhinology	Rehabilitation
G—Gynecology	Laryngology,	Phy—Physiology
GE—Gastroenterology	Rhinology	Pr—Proctology
GP—General Practice	Ob—Obstetrics	R—Roentgenology, Radiology
Hosp Ad—Hospital	ObG—Obstetrics,	S—Surgery
Administration	Gynecology	T—Tuberculosis
	Oph—Ophthalmology	U—Urology
	Or—Orthopedic Surgery	

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FIFTY YEAR CLUB

The House of Delegates of the Medical Society of the State of North Carolina in May of 1953 authorized the Executive Council of the Society to establish a special recognition for those physicians residing in the State of North Carolina, who were members currently of the State Medical Society, who had established legal practices of medicine and who had actively practiced medicine during their life time for a period of fifty years.

Listed below in alphabetical order are the names and address of those physicians residing in North Carolina, whom the Medical Society of the State of North Carolina has recognized as members of the FIFTY YEAR CLUB of the State Medical Society. This list will be added to from year to year and likewise subtracted from as losses to this club group are sustained and reckoned.

This listing for 1955 may include Fifty Year Club members, who have passed away since their recognition. After 1955, the list will include only those members surviving during the year of the list and those added for that year.

Fifty Year Club-1954

Anders, McTyeire G.
Gastonia, N. C.
Banner, Charles W.
Greensboro, N. C.
Bostic, William C.
Forest City, N. C.
Buffalo, J. S.
Garner, N. C.
Bullitt, James B.
Chapel Hill, N. C.
Busby, Julian G.
Salisbury, N. C.
Carmelley, J. H.
Statesville, N. C.
Covington, James M., Sr.
Wadesboro, N. C.
Cromartie, Robert Samuel
Elizabethtown, N. C.
Daniels, Oscar C.
Oriental, N. C.
Dees, Daniel A.
Bayboro, N. C.
Fassett, Burton W.
Durham, N. C.
Flinnin, James Meigs
Pilot Mountain, N. C.
Fortune, Alexander F.
Greensboro, N. C.

Garren, Robert Hall
Monroe, N. C.
Glenn, Lucius N.
Gastonia, N. C.
Harrill, Lawson B.
Caroleen, N. C.
Holt, William P.
Erwin, N. C.
Hovis, Leighton W.
Charlotte, N. C.
Hunt, John F.
Spindale, N. C.
Johnson, Floyd
Whiteville, N. C.
Lattimore, Everett B.
Shelby, N. C.
Long, Frederick Y.
Catawba, N. C.
Lowery, John Robert
Salisbury, N. C.
Lutterloh, Isaac H.
Sanford, N. C.
McIver, Lynn
Sanford, N. C.
Maxwell, Clarence S.
Beaufort, N. C.
Monk, Henry Lawrence
Salisbury, N. C.

Munroe, H. Stokes
Charlotte, N. C.
Orr, Charles C.
Asheville, N. C.
Purdy, James J.
Oriental, N. C.
Rankin, Watson S.
Charlotte, N. C.
Reitzel, Claude E.
High Point, N. C.
Ricks, Leonard E.
Fairmont, N. C.
Slate, John William
High Point, N. C.
Swann, Joseph F.
Kannapolis, N. C.
Taylor, William L.
Oxford, N. C.
Thompson, Claude D.
High Point, N. C.
Tyson, Thomas D., Sr.
Mebane, N. C.
Williams, John Drewery
Greensboro, N. C.
Wilkins, Samuel A.
Atlanta, Ga.
Wilson, Clarence L.
Lenoir, N. C.

Fifty Year Club-1955

Allen, Joseph A.
New London, N. C.
Alexander, James Ramsey
Charlotte, N. C.
Bellamy, Robert Hartlee
Wilmington, N. C.
Bonner, Kenn Plummer Battle
Morehead City, N. C.
Brown, James Stevens, Sr.
Hendersonville, N. C.
Burt, Samuel Perry
Louisburg, N. C.
Caveness, Zebulon Marvin
Raleigh, N. C.
Edwards, Bertie Oscar
Asheville, N. C.
Fearing, Isaiah
Elizabeth City, N. C.
Fenner, Edwin Ferebee
Henderson, N. C.
Gibson, Milton Reynolds
Raleigh, N. C.
Harriss, Andrew Howell
Wilmington, N. C.
Hawes, Charles Morris
Washington, N. C.

Holt, Thomas Jefferson
Wise, N. C.
Hooper, Delos D.
Sylva, N. C.
Kirk, William Redin
Hendersonville, N. C.
Laton, James Franklin
Albemarle, N. C.
Lynch, James Madison
Fairview, N. C.
Martin, John Floyd
Dunn, N. C.
Martin, Moir Saunders
Mt. Airy, N. C.
Morris, Joseph A.
Durham, N. C.
Newell, Leon Burns
Charlotte, N. C.
Northington, James Montgomery
Charlotte, N. C.
Peete, Charles Henry
Warrenton, N. C.
Perry, Henry B., Sr.
Boone, N. C.
Pfohl, Samuel Frederick
Winston-Salem, N. C.
Ray, John B.
Leaksville, N. C.

Rovster, Hubert Ashley
Raleigh, N. C.
Salley, Edward McQueen
Hendersonville, N. C.
Sikes, Gibson L.
Raleigh, N. C.
Slate, John Samuel
Winston-Salem, N. C.
Sloop, Eustace H.
Crossnore, N. C.
Smith, Oscar Fennell
Scotland Neck, N. C.
Stanley, John Haywood
Four Oaks, N. C.
Symington, John
Carthage, N. C.
Taylor, James Nathaniel
Greensboro, N. C.
Weaver, William Jackson
Asheville, N. C.
Wessell, John Charles
Wilmington, N. C.
Whisnant, Albert Miller
Charlotte, N. C.
Wright, John Bryan
Raleigh, N. C.

ROSTER OF FELLOWS FOR 1955

By Counties

NOTE: We have endeavored to secure correct information in regard to every physician whose name is listed. Anyone finding an error should report it immediately to the Executive Secretary of the State Society, 203 Capital Club Building, Raleigh, North Carolina.

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
ALAMANCE-CASWELL COUNTIES SOCIETY¹		
OFFICERS—President: Koury, George E., (Biog. below), Burlington		
Secretary: Walker, J. B., Jr., (Biog. below), Burlington		
Abernethy, Paul McBee, OALR, Bailey-Coble Bldg., Burlington; Bowman Gray, 1943....	1943	1947
Arey, J. Vince, ObG, Kernodle Clinic, Burlington; Harvard, 1946.....	1946	1951
Beck, J. Montgomery, U, 328 West Davis Street, Burlington; Western Res. Univ., 1944	1952	1953
Blair, George Walker, Jr., I, 328 West Davis Street, Burlington; Univ. of Penn., 1947....	1947	1953
Brooks, Ralph Edward, (Hon.), U, 1308 Rainey Street, Burlington; Jefferson, 1920.....	1920	1922
Bullard, George M., GP, Mebane Clinic, Mebane; Med. Coll. of Va., 1950.....	1951	1951
Carrington, Geo. Lunsford, (Hon.), S, Alamance Genl. Hosp., Burlington; Johns		
Hopkins, 1920.....	1920	1925
Coleman, Julian B., GP, Saxapahaw; McGill, 1952.....	1952	1954
Crawford, Porter F., D, 272 N. Graham-Hopedale Road, Burlington;		
Western Reserve, 1946.....	1952	1953
Crissman, Clinton S., GP, 114½ N. Main Street, Graham; Temple, 1942.....	1942	1947
Dickson, Malcolm Shields, GP & ObG, 132 Lexington Ave., Burlington;		
Med. Coll. of S. C., 1927.....	1927	1929
Ellington, Anzi Jefferson, (Hon.), OALR, Ellington Bldg., Burlington;		
Columbia Univ., 1915.....	1915	1917
Fewell, Richard A., I, 318 S. Main Street, Burlington; Univ. of Penn., 1945.....	1951	1951
Gaddy, George D., OALR, 205 Bailey-Coble Bldg., Burlington; Univ. of Ga., 1949.....	1953	1953
Goley, Willard Coe, GP, 214 N. Marshall Street, Graham; Univ. of Penn., 1924.....	1924	1926
Greene, Phares Yates, GP, Box 1205, Burlington; Northwestern Univ., 1932.....	1932	1934
Gwynn, Houston LaFayette, (Hon.), GP, Yanceyville; Med. Coll. of Va., 1923.....	1923	1925
Gwynn, Thomas Lea, GP, Yanceyville; Bowman Gray, 1951.....	1951	1955
Harden, Boyd, ObG, Box 1006, Burlington. Univ. of Penn., 1928.....	1931	1931
Harden, Graham, (Hon.), GP, Box 27, Burlington; Univ. of Penn., 1919.....	1920	1922
Hawkins, James Hubert, GP, 114½ N. Main St., Graham; Jefferson, 1946.....	1946	1949
Heffner, Bain L., I, 330 W. Front Street, Burlington; Northwestern Univ., 1936.....	1938	1947
Huffman, S. Vance, GP, RFD 2, Elon College; Harvard, 1953.....	1953	1954
Huntington, Sterling H., GP, 751 E. Davis St., Burlington; Albany Med. Coll., 1946....	1947	1948
Johnson, Joseph Lewis, GP, 205 N. Main St., Graham; Jefferson, 1926.....	1926	1930
Johnston, James W., ObG, 1308 Rainey St., Burlington; Med. Coll. of Va., 1946.....	1952	1952
Kernodle, Charles E., S, Kernodle Clinic, Burlington; Duke, 1942.....	1944	1949
Kernodle, Dwight T., I, Kernodle Clinic, Burlington; Duke, 1947.....	1947	1954
Kernodle, George Wallace, Pd, 321 West Front St., Burlington; Duke, 1944.....	1945	1948
Kernodle, Harold B., S, Kernodle Clinic, Burlington; Duke, 1939.....	1941	1946
Kernodle, John Robert, ObG, Kernodle Clinic, Burlington; Duke, 1941.....	1947	1949
Kerr, George R., Path, Alamance County Hospital, Burlington;		
University of Western Ontario, 1936.....	1954	1954
King, John Talbert, Pd, 328 W. Davis Street, Burlington; Med. Coll. of Va., 1945.....	1951	1952
Koury, George Eli, I & A, 1821 Hilton Rd., Burlington; Tulane, 1944.....	1945	1951
Koury, Marvella Vanney, Anes, 1821 Hilton Road, Burlington; Louisiana Univ., 1944	1950	1951
Kraycirik, Emery Thomas, I, Box 1153, 443 S. Spring St., Burlington; Duke, 1945.....	1945	1948
Lawson, George Wm., GP, 105 W. Harden St., Graham; Long Island Coll. of Med., 1935	1935	1938
Lynn, James W., Jr., Pd, 321 West Front Street, Burlington; Tulane, 1946.....	1954	1954
Maness, Paul Franklin, Pd, 321 W. Front St., Burlington; Duke, 1940.....	1946	1949
Matthews, Roland D., GP, Bailey-Coble Bldg., Burlington; Univ. of Maryland, 1948.....	1948	1953
McDade, Brodie Banks, (Hon.), GP, Box 269, Burlington; Univ. of Md., 1918.....	1918	1920
McLamb, George Thomas, GP, 112 Clay Street, Mebane; Univ. of Tenn., 1938.....	1941	1942
McPherson, Charles Wade, (Hon.), OALR, 323 W. Front Street, Burlington;		
Univ. of Md., 1910.....	1910	1912
Norville, William Larkin, PH, 400 East Fifth Ave., Mebane; Univ. of Tenn., 1936.....	1950	1951
Pittman, Dorn C., R, Alamance County Hospital, Burlington; Bowman Gray, 1945.....	1945	1951
Rippy, William D., GP, 272 N. Graham-Hopedale St., Burlington; Duke, 1950.....	1952	1952
Robinson, Donald Edward, Pd, 308 W. Davis St., Burlington; Harvard, 1927.....	1929	1930
Ross, Donald M., S, 401 W. Davis St., Burlington; Tufts Med. Coll., 1941.....	1950	1950
Scott, Peter Somers, GP, R.F.D. #2, Burlington; Univ. of Louisville, 1947.....	1949	1950
Scott, Samuel Floyd, (Hon.), GP, Route 2, Burlington; Univ. of Penn., 1918.....	1918	1920
Simmons, Alexander Wingate, GP, 423 Webb Avenue, Burlington; Jefferson, 1939.....	1939	1940
Simpson, Henry Hardy, GP, Elon College; Univ. of Md., 1925.....	1925	1926
Smedberg, George A., S, Alamance General Hospital, Burlington;		
Univ. of Louisville, 1946.....	1954	1954
Smith, Fitzhugh Lee, GP, Box 737, 115 E. Front St., Burlington;		
Univ. of Pittsburgh, 1927.....	1927	1928

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Spyker, Mitchell Alden, Path, 716 Nat'l Bank Bldg., Lima, Ohio; University of Cincinnati, 1941	1951	1952
Stoneburner, Richard G., S. 441 S. Spring Street, Burlington; Med. Coll. of Va., 1942	1953	1954
Tate, Allen D., Jr., GP, Box 715, 214 N. Marshall Street, Graham; Univ. of Md., 1948	1948	1950
Troxler, Raymond Moody, (Hon.), GP, Box 107, Burlington; Univ. of Md., 1914	1914	1915
Tyson, Thomas David, Sr., (Hon.), GP, Mebane; Univ. Coll. of Med., Richmond, 1899	1899	1904
Walker, John Barrett, Jr., GP, Bailey-Coble Bldg., Burlington; Med. Coll. of Va., 1944	1947	1948
Warren, Robert Franklin, (Hon.), GP, Prospect Hill; Atlanta Sch. of Med., 1911	1911	1912
Wilkins, Java Cleveland, (Hon.), GP, Haw River; Univ. of Md., 1911	1911	1920

ALEXANDER—SEE IREDELL—ALEXANDER

ALLEGHANY—SEE WILKES—ALLEGHANY

ANSON COUNTY SOCIETY²

OFFICERS— President: Burnette, Harvey L., (Biog. below), Morven		
Secretary: Allen, Charles I., Jr., (Biog. below), Wadesboro		
Allen, Charles Insley, (Hon.), S. 220 Morven Road, Wadesboro; Columbia Univ., Coll. of P. & S., 1913	1913	1922
Allen, Charles Insley, Jr., GP, East View Street, Wadesboro; Bowman Gray, 1951	1951	1953
Burnette, Harvey Loraine, Jr., GP, Box 143, Morven; Med. Coll. of S. C., 1945	1948	1949
Carter, Warren Dallas, GP, P.O. Box 235, Wadesboro; Med. Coll. of S. C., 1934	1935	1936
Covington, James Madison, Jr., GP, 32 East Morgan St., Wadesboro; Duke, 1938	1940	1942
Davis, James Matheson, (Hon.), GP, 211 W. Wade St., Wadesboro; Columbia Univ., 1913	1913	1920
Kress, Esta Joyce Levy, Pd, 15 Morven Road, Wadesboro; Med. Coll. of Va., 1935	1938	1939
Kress, Jacob Himi, GP, 15 Morven Road, Wadesboro; Med. Coll. of Va., 1936	1938	1939
McKinnon, William James, S. Anson Sanatorium, Wadesboro; Univ. of Md., 1940	1946	1946
Smethie, William Massie, S. Anson Sanatorium, Wadesboro; Med. Coll. of Va., 1939	1946	1946
Sorrell, Furman Yates, GP, E. Wade Street, Wadesboro; Jefferson, 1930	1930	1933

ASHE—WATAUGA COUNTIES SOCIETY³

OFFICERS— President: Keys, Carson M., (Biog. below), West Jefferson		
Secretary: Michal, Mary B. H., (Biog. below), Boone		
Ballou, James Larkin, OALR, Grassy Creek; Univ. of Nash. Med. Coll., 1901	1901	1901
Cooke, Hershell Marcus, GP, Hagaman Clinic, Boone; Med. Coll. of Va., 1941	1943	1943
Cutri, Joseph John, Jefferson; Georgetown Univ., 1953	1954	1955
Davant, Charles, GP, Blowing Rock Hospital, Blowing Rock; Med. Coll. of State of S. C., 1945	1948	1948
Dennis, Robert Glenn, GP, Blowing Rock; Bowman Gray, 1953	1953	1955
Freeman, Roy O., GP, Ashe Memorial Hosp., Jefferson; Bowman Gray, 1953	1953	1954
Hagaman, John Bartlett, (Hon.), GP, Boone; Univ. of Tenn., 1915	1915	1917
Hagaman, John Bartlett, Jr., GP, Boone; Univ. of Tenn., 1947	1948	1949
Hagaman, Len Doughton, GP, 229 E. King St., Boone; Univ. of Penn., 1936	1936	1938
Harmon, Raymond Harris, OALR, 307 E. King Street, Boone; Med. Coll. of Va., 1936	1936	1936
Jones, Dean Cicero, S. Jefferson; Univ. of Penn., 1927	1930	1930
Keys, Carson M., GP, West Jefferson; Med. Coll. of Va., 1952	1953	1953
Long, Lester Lee, GP, Box 4, West Jefferson; Lincoln Memorial Univ., 1916	1916	1934
Michal, Mary Barrows Harris, PH, P.O. Box 528, Boone; Yale, 1928	1938	1939
Miller, Cameron Eugene, GP, Jefferson; Bowman Gray, 1946	1947	1949
Owsley, Lawrence H., S. Watauga Hospital, Boone; Emory, 1940	1949	1949
Pennington, Robert B., GP, Hartford Hospital, Hartford, Conn.; Univ. of Va., 1951	1951	1953
Perry, Henry B., Sr., (Hon.), GP, Box 286, Boone; N. C. Med. Coll., 1905	1905	1922
Powers, Douglas F., GP, 3650th USAF Hosp., C-19 Dispensary, Sampson AFB, New York; Baylor Univ., 1947	1949	1951
Ray, Ritz Clyde, (Hon.), GP, West Jefferson; Med. Coll. of Va., 1916	1916	1917
+Robinson, W. J., (Hon.), GP, Creston; Univ. Med. Coll. of Kansas City, 1904	1907	1917
Smith, William Mitchell, GP, 109 Appalachian Street, Boone; Univ. of Mich., 1950	1951	1951
Tarnasky, Ralph, GP, West Jefferson; Bowman Gray, 1952	1952	1953
Wilson, Hadley M., GP, 711 E. King Street, Boone; Univ. of Louisville, 1952	1952	1953

AVERY COUNTY SOCIETY⁴

OFFICERS— President: Smith, E. H., (Biog. below), Crossnore		
Secretary: Donlan, Joseph E., (Biog. below), Banner Elk		
Buckner, Frank W., S. Grace Hospital, Banner Elk; Duke Univ. Sch. of Med., 1936	1952	1953
Burleson, William Brown, (Hon.), GP, Plumtree; Univ. of Md., 1915	1915	1916
Donlan, Joseph E., PH, Banner Elk; Georgetown University, 1940	1951	1952
Fink, Emma Sloop, GP, Garrett Memorial Hosp., Crossnore; Vanderbilt, 1936	1938	1938
Sloop, Eustace H., (Hon.), GP, Crossnore; N. C. Med. Coll., 1905	1905	1907
Smith, Eustace H., GP, Box 56, Crossnore; Med. Coll. of Va., 1950	1951	1952
Tate, Lawson, S. Grace Hosnital, Banner Elk; Univ. of Tenn., 1939	1941	1944
Tate, William Cummings, (Hon.), S. Grace Hosp., Banner Elk; Tenn. Med. Coll., 1908	1909	1912
Woodbridge, C. L., OALR, Banner Elk; Johns Hopkins, 1921	1953	1954

Name and Address

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BEAUFORT COUNTY SOCIETY⁵

OFFICERS—President: Williams, S. H., (Biog. below), Washington		
Secretary: Kling, L. E., (Biog. below), Washington		
Bonner, John Bryan, (Hon.), GP, Main Street, Box 116, Aurora; Univ. of Md., 1918.....	1918	1920
Byrum, Clifford C., GP, Belhaven, N. C.; Jefferson, 1943.....	1943	1946
Hackler, Robert Hardin, Jr., R, 120 Washington St., Washington; Jefferson, 1926.....	1926	1928
Haves, James Beebe, OALR, Box 440, Washington; Univ. of Va., 1932.....	1937	1938
Kling, Llewellyn Emil, PH, 1309 N. Market St., Washington; Louisiana Med Sch., 1940.....	1951	1951
Liverman, Henry J., I, P. O. Box 5, Englehard; Univ. of Louisville, 1950.....	1950	1952
Maynard, Eugene, GP, 230½ East Main St., Belhaven; Jefferson, 1950.....	1950	1952
Peters, August Richard, Jr., Pd, 120 Washington St., Washington; Univ. of Ga., 1935.....	1938	1939
Piver, William Crawford, GP, Tayloe Hosp., Washington; Hahnemann Med. Coll., 1941.....	1946	1946
Ramsay, James Graham, (Hon.), S, Tayloe Hospital, Washington; Univ. of Penn., 1922.....	1924	1924
Rodman, Clark, I, 120 Washington Street, Washington; Jefferson, 1943.....	1943	1947
Swindell, Lewis Holmes, Jr., (Hon.), GP, 420 N. Market St., Washington; Univ. of Penn., 1916.....	1916	1919
Tayloe, John Cotten, (Hon.), ObG, 120 Washington St., Washington; Univ. of Penn., 1922.....	1924	1925
Williams, Samuel Hodges, Jr., S, Tayloe Hospital, Washington; Univ. of Penn., 1942.....	1943	1944
Winstead, Ellis Grey, GP, Guaranty Bank Bldg., Belhaven; Med. Coll. of Va., 1929.....	1929	1930
Wright, James T., GP, Belhaven; Jefferson, 1943.....	1943	1947

BERTIE COUNTY SOCIETY⁶

OFFICERS—President: Jordan, W. P., (Biog. below), Windsor		
Secretary: Garriss, F. H., (Biog. below), Lewiston		
Atkins, William Marshall, GP, Windsor; Med. Coll. of Va., 1952.....	1953	1953
Cann, William Silas, GP & S, Bertie County Health Dept., Windsor; Stanford Univ., 1929.....	1947	1949
Castelloe, Cola, GP, Box 396, Windsor; Univ. of Penn., 1917.....	1917	1926
Darden, James Lee, Jr., GP, Colerain; Bowman Gray, 1947.....	1948	1950
Foushee, John C., S, 410 Granville Street, Windsor; Bowman Gray, 1944.....	1944	1953
Garriss, Frank Henry, (Hon.), GP, Box 136, Lewiston; Jefferson, 1912.....	1912	1918
Jordan, William Pritchard, GP, Windsor; Univ. of Md., 1936.....	1935	1939
Norfleet, Edgar Powell, (Hon.), GP, Box 176, Roxobel; Med. Coll. of Va., 1914.....	1914	1920
Saunders, Sheldon Asa, (Hon.), GP, Box 25, Aulander; Jefferson, 1914.....	1914	1918
Smith, Joseph Elmer, (Hon.), GP, Windsor; Med. Coll. of Va., 1921.....	1921	1922

BLADEN COUNTY SOCIETY⁷

OFFICERS—President: Fisher, George W., Jr., (Biog. below), Elizabethtown		
Secretary: Mills, Georgia, (Biog. below), Elizabethtown		
Bennett, Ernest Claxton, GP, Box 295, Elizabethtown; Med. Coll. of Va., 1926.....	1926	1927
Bridger, Clarence Edgerton, GP, (See Robeson County also), Box 428, Bladenboro; Bowman Gray, 1946.....	1946	1949
Bridger, Dewey Herbert, (Hon.), GP, Bladenboro; Jefferson, 1922.....	1922	1925
Clark, DeWitt Duncan, (Hon.), GP, Box 725, Clarkton; Med. Coll. of Va., 1917.....	1917	1920
Cromartie, Robert Samuel, (Hon.), PH, Health Dept., Elizabethtown; N. C. Med. Coll., 1900.....	1900	1906
Fisher, George Walton, Jr., GP, McPherson Hospital, Durham; Bowman Gray, 1943.....	1943	1947
Glenn, Channing, GP, P.O. Box 335, Elizabethtown; Med. Coll. of Va., 1933.....	1936	1939
Hutchinson, Sankey Smith, (Hon.), GP, Box 278, Bladenboro; N. C. Med. Coll., 1911.....	1911	1912
Mills, Georgia V., PH, Box 247, Elizabethtown; Wayne Univ. Coll. of Med., 1938.....	1938	1955
Pumphrey, Albert Franklin, S, P.O. Box 627, Elizabethtown; Coll. of Med. Evangelists, Calif., 1942.....	1952	1953
Singletary, George Currie, (Hon.) GP, Box 246, Clarkton; Univ. of Penn., 1917.....	1917	1918

BRUNSWICK COUNTY SOCIETY

BUNCOMBE COUNTY SOCIETY⁸

OFFICERS—President: Crump, G. Curtis, (Biog. below), Asheville		
Secretary: Barber, John F., (Biog. below), Asheville		
Ambler, Arthur Chase, (Hon.), Anes, 23 Flint St., Asheville; Jefferson, 1920.....	1921	1922
Anderson, John Bascom, S, 201 Haywood Bldg., Asheville; Univ. of Md., 1935.....	1935	1938
Anderson, Norman LaRue, I, T, & C, 86 Victoria Road, Asheville; Duke, 1939.....	1945	1945
†Armentrout, Charles Henry, I, 604 City Bldg., Asheville; Med. Coll. of Va., 1931.....	1940	1941
Arrendell, Cad Walder, Jr., S, 509 City Bldg., Asheville; Univ. of Okla., 1945.....	1954	1955
Atkins, Stanley Sisco, Or, 283 Biltmore Avenue, Asheville; Cornell, 1937.....	1943	1943
Bailey, Harmon J., ObG, 180 Biltmore Ave., Asheville; Wash. Univ., 1934.....	1946	1946
Baker, Barnwell Rhett, GP, 1089 Hendersonville Rd., Biltmore; Med. Coll. of S. C., 1923.....	1952	1954
Baldwin, Marie, P, Highland Hosp., Asheville; Med. Coll. of S. C., 1929.....	1947	1951
Barber, John F., ObG, 27 Market Street, Asheville; Univ. of Penn., 1940.....	1941	1948
Beam, Lewis Rockwell, Jr., Pd, 180 Biltmore Ave., Asheville; Vanderbilt Univ., Nashville, Tenn., 1951.....	1953	1953

†Deceased

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Belcher, Cecil Cullen, U, 608 City Bldg., Asheville; Tulane, 1930.....	1939	1940
Bell, L. Nelson, S. 42 College Park Place, Asheville; Med. Coll. of Va., 1916.....	1941	1942
Bittinger, Samuel Moffett, (Hon.), I. U. S. Veterans Hosp., Oteen; George Wash. Univ., 1918.....	1924	1924
Bradley, Jeter Carroll, OALR, Box 327, Weaverville; George Wash. Univ., 1915.....	1948	1949
Bradley, John David, P, 803 City Bldg., Asheville; Univ. of Ga., 1936.....	1945	1947
Brewton, William Allan, I, 5 Lake Drive, Enka; Univ. of Penn., 1927.....	1927	1929
Briggs, Henry Harrison, Oph, 611 City Bldg., Asheville; Yale, 1931.....	1933	1934
Brown, Kermit English, ObG, 506 Flatiron Bldg., Asheville; Jefferson, 1927.....	1927	1930
Brownsberger, Ethel May, GP, 75 Hendersonville Road, Biltmore; Coll. of Med. Evangelists, 1927.....	1933	1934
Bumgarner, John Reid, I, W. N. C. Sanatorium, Black Mtn.; Med. Coll. of Va., 1939.....	1939	1940
Burleson, Robert Joe, Or.S. 283 Biltmore Ave., Asheville; Univ. of Louis., Ky., 1943.....	1954	1954
Burns, Margaret Virginia, P, State Hospital, Morganton; Duke, 1938.....	1948	1949
Camblos, Joshua Fry Bullitt, S, 500 New Med. Bldg., Asheville; Univ. of Va., 1943.....	1948	1949
Camp, Edward H., S, 247 Charlotte St., Asheville; Univ. of Chicago, 1939.....	1950	1951
Carroll, Rubyetta Charman, P, Highland Hosp., Asheville; Univ. of Colorado, 1939.....	1941	1941
Chandler, Weldon P., GP, P.O. Box 386, Weaverville; Univ. of Md., 1940.....	1940	1946
Chapman, Edwin James, ALR, Haywood Bldg., Asheville; Northwestern Univ., 1928.....	1939	1940
Chapman, Jesse P, S, New Medical Bldg., Asheville; Univ. of Penn., 1943.....	1948	1953
Clapp, Hubeit Lee, GP, Box 145, Swannanoa; Univ. of Ga., 1937.....	1938	1938
Clark, Harold Stevens, (Hon.), S, 29 N. Market Street, Asheville; Univ. of Penn., 1922.....	1922	1924
Clayton, Eugene C., GP, 404 City Bldg., Asheville; Bowman Gray, 1945.....	1945	1948
Codnere, John T., U, 400 City Hall Bldg., Asheville; Univ. of Toronto, 1938.....	1946	1946
Cooley, Samuel Studdiford, I, P.O. Box 745, Black Mountain; N. Y. Univ., 1934.....	1934	1938
Corcoran, Edwin Emmons, I, 408 Medical Bldg., Asheville; Med. Coll. of S. C., 1937.....	1946	1948
Coughlin, Joyce Desmond, U, 409 Flatiron Bldg., Asheville; Univ. of Buffalo, 1947.....	1954	1954
Craig, Robert Lawrence, PN, Highland Hospital, Asheville; Johns Hopkins, 1935.....	1939	1940
Croom, Gabe Holmes, (Hon.), P, Box 667, Wesnoca San., Asheville; N. C. Med. Coll., 1909.....	1909	1916
Crow, Samuel Leslie, I & C, 709 Flatiron Bldg., Asheville; Emory Univ., 1925.....	1926	1927
Crump, Cecil LaVon, OALR, 30 Wall Street, Asheville; Baylor Univ., 1930.....	1935	1936
Crump, George Curtis, I & T, 806 Public Service Bldg., Asheville; Harvard, 1926.....	1933	1934
Dodd, Patricia, S & G, 23 Flint Street, Asheville; Univ. of Md., 1944.....	1954	1955
Edwards, Bertie Oscar, (Hon.), I, 310 Flatiron Bldg., Asheville; N. C. Med. Coll., 1905.....	1905	1909
Espey, Dan, Jr., T, Western N. C. Sanitarium, Black Mtn.; Univ. of Louisville, 1947.....	1951	1952
Farmer, Woodard Eason, I, Biltmore Station, Asheville; Tulane, 1939.....	1947	1947
Feldman, Leon Henry, I, Flatiron Bldg., Asheville; Univ. of Md., 1934.....	1938	1938
Folsom, Theodore Winslow, GP, Swannanoa; Univ. of Penn., 1921.....	1921	1923
Franz, Bruce J., S, 610 City Hall Bldg., Asheville; Johns Hopkins, 1941.....	1954	1954
Frazier, Claude A., Pd & A, 516 City Hall Bldg., Asheville; Med. Coll. of Va., 1944.....	1950	1950
Freeman, William Talmage, Pd, McGeachy Bldg., Biltmore Station, Asheville; Univ. of Ga., 1917.....	1927	1929
Galloway, James Bruce, Jr., Or, 247 Charlotte St., Asheville; Queen's Univ., Kingston, Ontario, Canada, 1944.....	1949	1950
Galloway, Louise J., Anes, Box 89, Enka; Tulane, 1944.....	1950	1951
Gibbs, Robert Louis, S, 807 Public Service Bldg., Asheville; Univ. of Md., 1940.....	1949	1950
Gilbert, George Gaylord, U, 409 Flatiron Bldg., Asheville; Johns Hopkins, 1938.....	1947	1947
Gillespie, S. Crawford, I, 806 Flatiron Bldg., Asheville; Univ. of Cincinnati, 1931.....	1935	1936
Grantham, Wilmer Lloyd, (Hon.), U, 93 Patton Avenue, Asheville; N. C. Med. Coll., 1906.....	1906	1908
Greenwood, Adolphus Barte, (Hon.), U, Rt. 2, Box 275, Asheville; Johns Hopkins, 1916.....	1916	1917
Griffin, Mark Alexander, (Hon.), PN, Appalachian Hall, Asheville; Jefferson, 1917.....	1917	1918
Griffin, Mark Alexander, Jr., PN, 26 Edgemont Road, Asheville; Univ. of Penn., 1946.....	1952	1953
+Griffin, William Ray, (Hon.), PN, Appalachian Hall, Asheville; Jefferson, 1910.....	1910	1917
Griffin, William R., Jr., PN, Appalachian Hall, Asheville; Jefferson, 1944.....	1945	1948
Griffith, Franklin Webb, (Hon.), S (Retired), Langchamp Apt., Asheville; Johns Hopkins, 1906.....	1911	1912
Griffith, Lewie Muller, (Hon.), OALR, 46 Haywood St., Asheville; Johns Hopkins, 1915.....	1916	1918
Gross, Frank Blackburn, Jr., I, 10 Vanderbilt Place, Asheville; Bowman Gray, 1945.....	1945	1951
Hartman, Bernhard Henry, Pd, 607 City Bldg., Asheville; Yale, 1937.....	1941	1942
Hensley, Charles Albert, I, 500 Medical Bldg., Asheville; Jefferson, 1917.....	1917	1927
Herbert, William Pinkney, (Hon.), S, Cedar Valley Farms, Laurens, S. C., Univ. of Va., 1907.....	1910	1911
Higgins, Kenneth Ellis, Ind, 336 W. Keith St., Fort Wayne, Ind., Univ. of Indiana, 1936.....	1954	1954
Hillier, William F., Jr., NS, City Hall Bldg., Asheville; Boston Univ., 1938.....	1949	1950
Hinman, Havilah E., Ob, 410 City Hall Bldg., Asheville; Univ. of Vt., 1936.....	1948	1949
Hollyday, William Murray, (Hon.), OALR, 20 Battery Park Ave., Asheville; Univ. of Md., 1908.....	1914	1915
Hornowski, M. J., P, 394 Merrimon Avenue, Asheville; Univ. of Va., 1945.....	1951	1951
Hoskins, John Robison, III, Anes, 23 Flint St., Asheville; Jefferson, 1944.....	1950	1950
Hubbard, Robert Thomas, GP, 304 Medical Bldg., Asheville; Temple, 1943.....	1943	1947
Huffins, Thomas Ruffin, (Hon.), U, 20 Battery Park Avenue, Asheville; Indiana Univ., 1919.....	1922	1924

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Johnson, Walter Royle, GE & I, 408 Medical Bldg., Asheville; Univ. of Minn., 1924.....	1933	1934
Justice, William Shipp, S, 408 Med. Bldg., Asheville; Harvard, 1926.....	1930	1931
Keleher, Michael Francis, S, 303 City Hall Bldg., Asheville; Univ. of Colorado, 1940....	1949	1949
Kerr, John Guthrie, GP, Leicester; St. Andrew Univ., Scotland, 1938.....	1953	1954
King, Edward, (Hon.), Anes, 20 Battery Park Place, Asheville; Harvard, 1917.....	1921	1922
Klosternmyer, Louis Leon, R, 611 Flatiron Bldg., Asheville; Univ. of Oklahoma, 1922....	1951	1951
Knoefel, Arthur Eugene, Jr., GP, 114 Montreat Rd., Black Mountain; Louisiana State Univ., 1935.....	1935	1938
Kodack, Albert, GP & S, 808 City Hall Bldg., Asheville; Univ. of Toronto, 1940.....	1943	1946
Koon, Ethen Sease, Jr., S, 310 New Medical Bldg., Asheville; Duke, 1946.....	1953	1953
Lacy, George R., Jr., Path, Mem. Mission Hosp., Asheville; Univ. of Pittsburgh, 1943....	1953	1953
Littlejohn, James Talmadge, I, 310 New Med. Bldg., Asheville; Univ. of Penn., 1945...	1951	1952
Lord, Margery Juline, (Hon.), PH, Buncombe Co. Health Dept., P.O. Box 7525, Asheville; Univ. of Mich., 1916.....	1918	1919
Lott, William Clifton, U, 815 Flatiron Bldg., Asheville; Univ. of Colorado, 1929.....	1930	1931
Lyda, Edgar W., ObG, 10 Vanderbilt Place, Asheville; Bowman Gray, 1944.....	1944	1947
Lynch, James Madison, (Hon.), Retired, S, Fairview; Univ. of Md., 1904.....	1912	1913
MacAlpine, Orville Duncan, Pd, 312 City Bldg., Asheville; Coll. of Med. Evang., 1940....	1949	1949
Macatee, George, Jr., ObG, 200 Charlotte St., Asheville; George Wash. Univ., 1939.....	1947	1947
Matros, Nathaniel Hamilton, S, 12 Vanderbilt Place, Asheville; Marquette Univ., 1930...	1933	1934
Mathews, Wallace Russell, Pd, 5 Ravencroft Drive, Asheville; Univ. of Western Ontario, Canada, 1920.....	1944	1945
McCall, William Herbert, OALR, 601 City Bldg., Asheville; Med. Coll. of Va., 1938.....	1941	1941
McCracken, Marvin Howell, GP, 514 City Hall Bldg., Asheville; Univ. of Louisville, 1930...	1930	1933
McDuffie, Robert Stanley, ObG, 23 Flint Street, Asheville; Emory Univ., 1944.....	1945	1955
McGowan, Joseph Francis, OALR, 29 N. Market St., Asheville; Univ. of Md. & Coll. of P. & S., 1929.....	1937	1939
McGuffin, William Christian, Pd, 180 Biltmore Ave., Asheville; Coll. of Med. Evang., 1933.....	1935	1948
Mears, George Augustus, S, 46 Haywood St., Asheville; Syracuse Univ., 1924.....	1924	1927
Meriwether, Benjamin Morsell, (Hon.), S, Medical Bldg., Asheville; University of Louisville, 1915.....	1915	1923
Metcalf, Lawrence E., Pd, 503 City Bldg., Asheville; Northwestern Univ., 1942.....	1942	1947
Millender, Charles White, (Hon.), S & GP, 230 Pearson Drive, Asheville; Tulane, 1919....	1921	1924
Miller, Henry Rankin, GP, Box 967, Black Mountain; Univ. of Va., 1943.....	1947	1947
Moore, Edward Eugene, Oph, 706 Flatiron Bldg., Asheville; Harvard, 1942.....	1947	1948
Moore, Julian Alison, (Hon.), S, 20 Battery Park Ave., Asheville; Univ. of Penn., 1918...	1918	1921
Morgan, Burnice Earl, (Hon.), GP, 304 Medical Bldg., Asheville; Univ. of Tenn., 1917...	1921	1922
Morgan, Grady Alexander, GP, Buncombe Co. Courthouse, Asheville; Univ. of Tenn., 1917.....	1920	1926
Morrison, Roger William, Path, 65 Sunset Parkway, Asheville; Harvard, 1943.....	1951	1952
Mucci, Lawrence A., R, 247 Charlotte St., Asheville; Univ. of Rochester, 1934.....	1950	1951
Murphy, Gibbons Westbrook, R, 611 Flatiron Bldg., Asheville; Emory, 1923.....	1923	1927
Nailling, Richard Cabot, S, 32 Wall Street, Asheville; Vanderbilt, 1940.....	1943	1944
Norburn, Charles Strickland, (Hon.), S, 9 Biltmore Plaza, Asheville; Univ. of Va., 1917...	1921	1924
Norburn, Russell Lee, S & Ind, 9 Biltmore Plaza, Asheville; Vanderbilt, 1925.....	1925	1927
Nunnery, William Ernest, U, 807 Public Service Bldg., Asheville; Univ. of Kansas, School of Medicine, 1942.....	1953	1953
Odom, Robert E., Oph, 331 Haywood Building, Asheville; Univ. of Va., 1930.....	1951	1951
Ogilvie, Walter Ellsworth, III, I, 394 Merrimon Ave., Asheville; Columbia Univ., 1945...	1951	1952
Orr, Charles Collins, (Hon.), I & T, 29 N. Market St., Asheville; Univ. of Md., 1904....	1904	1905
Pipes, David McKowen, A, 52 Page Avenue, Asheville; Tulane, 1934.....	1939	1940
Powell, Jack, S, 602 New Medical Bldg., Asheville; Med. Evangelist, Los Angeles, Calif., 1946.....	1950	1954
Powell, William Flynn, OALR, 810 City Hall Bldg., Asheville; Duke, 1937.....	1946	1946
Prather, Fonzo Goff, GP, 251 Tunnel Road, Asheville; Univ. of Md., 1923.....	1946	1947
Printz, Don R., D, 315 City Bldg., Asheville; Ohio State Univ., 1932.....	1947	1947
Raiford, Theodore Sidney, S, 20 Battery Park Ave., Asheville; Johns Hopkins, 1930....	1947	1947
Raper, James Sidney, R, 20 Battery Park Avenue, Asheville; Duke, 1938.....	1946	1946
Rathbun, Lewis Standish, ObG, 29 N. Market Street, Asheville; Harvard, 1939.....	1947	1948
Richardson, Frank Howard, (Hon.), Pd, Children's Clinic, Black Mtn.; Cornell, 1906....	1919	1920
Roach, Leonard H., ObG, 610 City Bldg., Asheville; Univ. of Cinn., 1942.....	1947	1948
Robertson, Logan T., Ind, 247 Charlotte Street, Asheville; Univ. of Cinn., 1942.....	1942	1947
Russell, Phillip E., I, City Bldg., Asheville; Duke, 1950.....	1954	1954
Russell, William Marler, OALR, 68 Patton Avenue, Asheville; Univ. of Cinn., 1928.....	1931	1932
Schoenheit, Edward William, (Hon.), I, 46 Haywood St., Asheville; Jefferson, 1920....	1920	1921
Seyern, Henry Doeller, Or, 283 Biltmore Avenue, Asheville; Johns Hopkins, 1940.....	1946	1947
Shifley, Glen M., Anes, 5 White Oak Rd., Arden; Univ. of Louisville, 1941.....	1954	1954
Shirey, John L., A, 52 Page Ave., Asheville; Jefferson, 1939.....	1949	1950
Shuford, Mary Frances, GP, Legal Bldg., Asheville; Rush Med. Coll., 1934.....	1934	1935
Sluder, Fletcher S., ObG, 506 Flatiron Bldg., Asheville; Univ. of Chicago, 1938.....	1938	1946
Smart, Gardner Ford, OALR, 801 City Bldg., Asheville; Duke, 1940.....	1943	1947
Smathers, Irma Carlene Henderson, PH, 1295 Merrimon Avenue, Asheville; Tulane, 1933.....	1934	1935
Smith, Bernard Reid, (Hon.), I, 32 St. Dunstan's Rd., Asheville; Jefferson, 1911.....	1913	1914
Smith, Everett D., Candler; Coll. of Med. Evang., 1953.....	1954	1954

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Sprinkle, Charles Nichols, (Hon.), GP, P. O. Box 218, 104 N. Main Street, Weaverville; Jefferson, 1910	1910	1922
Sprinkle, Lawrence Tilson, GP, P.O. Box 218, Weaverville; Jefferson, 1945	1945	1948
Stanley, Sherburn Moore, I, P.O. Box 66, Enka; McGill Univ., 1940	1949	1950
Stephens, Freeman Irby, I, 305 City Hall Bldg., Asheville; Coll. of P. & S., Columbia Univ., 1940	1948	1948
Swann, Cecil Collins, ALR, 706 Flatiron Bldg., Asheville; Tulane, 1926	1930	1931
Thomas, Charles Darwin, T, Western N. C. Sanatorium, Black Mountain; Univ. of Indiana, 1926	1930	1930
Tyroler, Herman A., I, 247 Charlotte Street, Asheville; New York Univ., 1947	1953	1954
Vernon, William Chester, GP, 247 Charlotte Street, Asheville; Univ. of Chicago, 1947	1953	1954
Vollmer, Donald H., I, 212 New Medical Bldg., Asheville; Coll. of Med. Evang., 1940	1949	1949
Waller, Louis Clinton, GP, 1055 Haywood Road, Asheville; Coll. of Med. Evang., 1943	1946	1947
Watts, Walter M., Or, 5 Ravenscroft Drive, Asheville; Emory, 1942	1942	1951
Weaver, William Jackson, (Hon.), GP, Route 4, Asheville; Jefferson, 1898	1897	1903
Weizenblatt, Sprinza, Oph, 709 New Medical Bldg., Asheville; Univ. of Vienna, 1922	1929	1931
White, Robert Alexander, (Hon.), ObG, 23 Flint St., Asheville; Univ. of Cinn., 1918	1920	1921
Whitehead, Seba L., (Hon.), D, 508 Public Service Bldg., Asheville; Jefferson, 1921	1921	1923
Williams, Jabez H., (Hon.), I & T, V. A. Hospital, Oteen; Jefferson, 1920	1920	1922
Willis, Candler Arthur, S, Box 289, Enka; Duke, 1936	1938	1938
Wilson, George Darwin, PMR, 308 City Bldg., Asheville; Temple, 1937	1939	1946
Wilson, Roebry Bryant, Anes, Flatiron Bldg., Asheville; Univ. of Louisville, 1931	1931	1933
Witten, Ernest S., I & T, 614 City Hall Bldg., Asheville; Georgetown Univ., 1944	1944	1950
Wood, Hagan Emmett, T, Western N. C. Sanatorium, Black Mountain; Emory, 1922	1938	1939
Woodard, Marshall Wayne, Oph, 517 Flatiron Bldg., Asheville; Duke, 1943	1954	1955
Worley, James Harr, S, 302 City Hall Bldg., Asheville; Univ. of Tenn., 1931	1934	1935
Young, John Clingman, U, 403 Flatiron Bldg., Asheville; Univ. of Tenn., 1926	1926	1929
Young, John Paul, I, 180 Biltmore Ave., Asheville; Univ. of Maryland, 1948	1953	1954

BURKE COUNTY SOCIETY⁹

OFFICERS—President: Patton, William H., Jr., (Biog. below), Morganton
Secretary: Lane, Edgar W., (Biog. below), Morganton

Adams, Rayford Kennedy, (Hon.), PN, State Hospital, Morganton; Jefferson, 1912	1912	1916
Arney, William Charles, GP, 402 S. Sterling Street, Morganton; Univ. of Md., 1940	1940	1942
Barron, John Isaac, GP, 107 Queen Street, Morganton; Univ. of Tenn., 1950	1951	1952
Beall, Louis Girardeau, (Hon.), PN, State Hospital, Morganton; N. C. Med. Coll., 1906	1906	1906
Bell, Ira Eugene, R, 18 Thirteenth Ave., N. E., Hickory; Univ. of Ga., 1945	1950	1951
Billings, Gilbert M., (Hon.), OALR, 405 S. Sterling Street, Morganton; Tulane, 1919	1919	1920
Byrd, William Carey, Hosp.Ad., State Hospital, Morganton; Jefferson, 1923	1925	1937
Coleman, Lester Livingston, GP, P. O. Box 76, Hildebran; Bowman Gray, 1950	1950	1952
Collett, James R., I, Kirksey Bldg., Morganton; Harvard, 1944	1944	1947
Ervin, John Witherspoon, GP, Ervin Bldg., Morganton; Med. Coll. of Va., 1933	1935	1936
Hairfield, Beverly Dew, S, 110½ S. Sterling Street, Morganton; Vanderbilt, 1939	1939	1948
Hamer, Alfred Wilson, GP, 317 N. Green Street, Morganton; S. C. Med. Coll., 1921	1938	1940
Helms, Jefferson Bivins, GP, 403 S. King Street, Morganton; Univ. of Penn., 1928	1928	1931
Hogshead, Ralph, Jr., GP, 114 S. Sterling Street, Morganton; Temple, 1943	1948	1948
Hudson, Miles H., GP, Box 73, Valdese Gen. Hospital, Valdese; Bowman Gray, 1944	1944	1947
Kibler, William Herbert, (Hon.), GP, Box 675, Morganton; Univ. of Penn., 1914	1914	1918
Kirksey, William Albert, GP, 302 S. King St., Morganton; Wash. Univ., St. Louis, 1944	1947	1947
Lacy, Thomas Allen, P, State Hospital, Morganton; Emory Univ., 1927	1927	1953
Lane, Edgar W., U, 222 W. Union St., Morganton; Bowman Gray, 1944	1944	1952
Lang, Andrew Martin, GP, 403 S. King Street, Morganton; Med. Coll. of Va., 1943	1947	1947
Long, Benjamin L., GP, Glen Alpine; N. C. Med. Coll., 1913	1913	1914
Lynn, Cy Kellie, GP, Valdese General Hosp., Valdese; Med. Coll. of Va., 1932	1933	1937
McGimsey, James F., Jr., I, 222 W. Union Street, Morganton; Harvard, 1943	1946	1947
McKee, John Sasser, Jr., P, State Hosp., Morganton; Univ. of Penn., 1929	1929	1936
Mullen, Malcolm Preston, I, State Hosp., Morganton; Emory Univ., 1927	1927	1928
Nichols, Thomas Rogers, I, 206 N. Sterling St., Morganton; Univ. of Rochester, 1930	1943	1943
Oehlbeck, Luther W. F., R, 18 Thirteenth Ave., N. E., Hickory; Univ. of Rochester, 1930	1939	1939
Palmer, Yates Shuford, S, Valdese General Hospital, Valdese; Med. Coll. of Va., 1931	1931	1933
Pascal, Robert A., GP, Valdese General Hospital, Valdese; Bowman Gray, 1951	1951	1953
Patton, William Hugh, Jr., Pd, 305 College Street, Morganton; Univ. of Penn., 1937	1937	1940
Reece, John C., Path, Grace Hospital, Morganton; N. Y. University, 1938	1938	1946
Riggs, Millard McAdoo, GP, Box B, Drexel; Duke, 1943	1947	1947
Stiff, A. Olin, GP, 506 W. Quill Drive, San Antonio, Texas; Med. Coll. of S. C., 1944	1945	1945
Taylor, Erasmus Hervey Evans, (Hon.), P, Broadoaks Sanatorium, Morganton; Tulane, 1924	1924	1925
Vernon, James Taylor, P, Broadoaks Sanatorium, Morganton; Wash. Univ., St. Louis, 1945	1945	1946
†Vernon, James William, (Hon.), P, 210 Valdese Avenue, Morganton; Jefferson, 1909	1909	1913
Walton, Cyrus Leslie, GP, Box 26, Glen Alpine; Med. Coll. of Va., 1931	1931	1933

†Deceased

Name and Address

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CABARRUS COUNTY SOCIETY¹⁰

OFFICERS—President: Bailey, R. C., (Biog. below), Concord

Secretary: Nance, Lee, Jr., (Biog. below), Kannapolis

Adams, Anne Stephenson, G. 86 Grove Street, Concord;

Woman's Med. Coll. of Penn., 1937.....	1939	1940
Adams, Fletcher Ruff, Pd, 53 S. Union St., Concord; Med. Coll. of S. C., 1935.....	1936	1942
Bailey, Robert C., S, 1016 N. Church St., Concord; Western Reserve, 1943.....	1953	1953
Bangle, James Alexander, (Hon.), GP, Cannon Bldg., Concord; N. C. Med. Coll., 1916.....	1916	1920
Barnhardt, Albert Earl, GP, 215 Professional Bldg., Kannapolis; Univ. of Md., 1933.....	1933	1941
Barrier, Henry Webster, PN, Concord; Chicago Med. School, 1921.....	1931	1936
Barringer, Archie Lipe, GP, P.O. Box 278, Mt. Pleasant; Temple, 1936.....	1937	1944
Brandon, Wesley Otis, GP, Concord; Med. Coll. of Va., 1928.....	1929	1932
Brown, James Walter, Jr., ALR, 205 Cabarrus Bank Bldg., Kannapolis; Duke, 1941.....	1949	1952
Bunn, Justus J., (Hon.), GP, Box 96, Mt. Pleasant; N. C. Med. Coll., 1912.....	1913	1915
Burns, Joseph Eugene, GP, Cabarrus Bank Bldg., Concord; Med. Coll. of Va., 1923.....	1923	1928
Busby, Julian, GP, Professional Bldg., Kannapolis; Johns Hopkins, 1931.....	1931	1937
Calder, Duncan Graham, Jr., S, Ardsley Road, Concord; Univ. of Penn., 1936.....	1940	1940
Correll, Earl Eugene, GP, 210 Cabarrus Bank Bldg., Kannapolis; Univ. of Tenn., 1946.....	1947	1951
Craven, Frederick Thorne, GP, 7 N. Union Street, Concord; N. Y. Univ., 1938.....	1938	1940
Ernst, Henry E., GP, 57 N. Church Street, Concord; Med. Coll. of Va., 1943.....	1947	1948
Floyd, William Russell, S, 1016 N. Church St., Concord; Jefferson, 1929.....	1936	1938
Grimmett, Matthew Hill, Pd, Ardsley Rd., Concord; Duke, 1943.....	1949	1950
Hamrick, Ladd Watts, Jr., I, 194 Lake Concord Rd., Concord; Bowman Gray, 1946.....	1946	1946
Hawkins, Barry F., I, 26 Patton Ave., Concord; Univ. of Va., 1944.....	1951	1952
Hege, John Roy, (Hon.), PH, Box 1149, County Health Dept., Concord; Univ. of Md., 1916.....	1916	1917
Jones, Paul E., I, 306 Professional Bldg., Kannapolis; Jefferson, 1944.....	1945	1951
Ketner, Fred Yarkin, GP, 57 N. Church Street, Concord; Med. Coll. of Va., 1928.....	1929	1930
Kneeder, William Harding, I, Cannon Building, Concord; Univ. of Penn., 1926.....	1946	1947
Liles, Geo. W., S, 208 Professional Bldg., Kannapolis; Duke, 1944.....	1944	1948
Lockhart, David Armistead, Pd, 8 Ardsley Road, Concord; Duke Univ., 1951.....	1953	1954
Maulden, Paul Ranzo, S, 206 Professional Bldg., Kannapolis; N. Y. Univ., 1932.....	1932	1934
McWhorter, Robert L., I, 194 Lake Concord Rd., Concord; Duke, 1947.....	1947	1954
Monroe, Lance Truman, ObG, Woman's Clinic, Concord; N. Y. Univ., 1932.....	1937	1938
Moorefield, Robert Hoyle, GP, Box 931, Kannapolis; Med. Coll. of Va., 1936.....	1936	1941
Morris, Rae Henderson, S, Box 323, Concord; Jefferson, 1929.....	1929	1932
Noel, George Thompson, Oph, 204 Cabarrus Bank Bldg., Kannapolis; Jefferson, 1938.....	1938	1952
Nolan, James Onslow, (Hon.), GP, 209 Professional Bldg., Kannapolis; Jefferson, 1921.....	1921	1922
Rankin, Richard Brandon, (Hon.), OALR, 53 S. Union Street, Concord; Tulane, 1917.....	1920	1922
Rice, Robert S., S, Kannapolis Highway, Concord; Univ. of Georgia, 1945.....	1953	1953
Smerznak, John Joseph, I, 209 E. Corban St., Concord; Hahnemann Med. School, 1940.....	1940	1946
Stephens, Richard Samuel, I, 307 North Ridge Ave., Kannapolis; Med. College of Va., 1949.....	1953	1954
Swann, Joseph Fuller, (Hon.), GP, 124 Bethpage Road, Kannapolis; P. & S. of Baltimore, 1896.....	1896	1904
Thompson, Alexander Frank, Jr., S, Ardsley Road, Concord; Univ. of Md., 1940.....	1950	1951
Tuttle, Marler Slate, GP, 201 Prof. Bldg., Kannapolis; Temple, 1938.....	1938	1940
Whicker, Guy Lorraine, GP, 201 Professional Bldg., Kannapolis; Univ. of Md., 1926.....	1926	1928
White, Estus, GP, 301 Prof. Bldg., Box 1025, Kannapolis; Tulane, 1926.....	1926	1940
Widenhouse, Martin Aubrey, GP, 307 Cannon Bldg., Concord; Univ. of Cincinnati, 1925.....	1926	1927
Williams, Jerome Otis, Path, Cabarrus County Hosp., Concord; Bowman Gray, 1946.....	1947	1951
Williams, Marguerite Lanzenby, Pd, Country Club Drive, Concord; Bowman Gray, 1946.....	1947	1954
Youngblood, Vernon Hinson, U, Kannapolis-Concord Highway, Concord; Emory, 1944.....	1946	1947
Yow, Daniel Eugene, I, 325 S. Union St., Concord; Temple, 1935.....	1935	1937

CALDWELL COUNTY SOCIETY¹¹

OFFICERS—President: Carpenter, Kenneth C., (Biog. below), Lenoir

Secretary: Happer, William, (Biog. below), Lenoir

Blackwelder, Verne Hamilton, S, Blackwelder Hospital, Lenoir; Univ. of Penn., 1929.....	1929	1931
Byerly, Wesley Grimes, (Hon.), OALR, 105 N. Boundry Street, Lenoir; Med. Coll. of Va., 1924.....	1924	1925
Carpenter, Kenneth Carrington, GP, P. O. Box 635, Lenoir; Bowman Gray, 1947.....	1948	1950
Corpening, Oscar J., (Hon.), GP, Box 167, Granite Falls; Univ. Coll. of Med., Va., 1906.....	1906	1906
Corpening, William Nye, GP, 6 N. Main Street, Granite Falls; Univ. of Md., 1943.....	1943	1944
Dula, Frederick Mast, S, Dula Hospital, Lenoir; Vanderbilt, 1932.....	1934	1934
Fetner, Lawrence Merrill, R, Blackwelder Hospital, Lenoir; N. C. Med. Coll., 1914.....	1914	1938
Hamer, Douglas, Jr., GP & U, Fidelity Bldg., Lenoir; Med. Coll. of S. C., 1927.....	1927	1930
Happer, William, PH, Health Dept., Lenoir; Univ. of Edinburgh; 1925.....	1925	1951
Hedrick, Clyde Reitzel, GP & C, Box 619, Lenoir; Georgetown Univ., 1925.....	1925	1926
Hickman, Harry Stuart, Pd, 129 W. Ashe St., Lenoir; Duke, 1938.....	1940	1942
Jones, Martin E., GP, N. Main Street, Granite Falls; Duke, 1943.....	1943	1947
Keathley, Franklin Burr, GP, 109 S. Boundary St., Lenoir; Univ. of Tenn., 1946.....	1950	1950
Kendrick, Charles Mattox, I, 351 Mulberry St., Lenoir; Duke, 1933.....	1939	1939
Lore, Ralph Eli, S, 324 S. Mulberry Street, Lenoir; Rush Medical College, 1932.....	1933	1937

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
McNairy, Margaret Caroline, (Hon.), Ob, 125 W. Harper Avenue, Lenoir; Woman's Med. Coll. of Penn., 1917.....	1917	1919
Roach, Robert B., S. 351 S. Mulberry St., Lenoir; Temple, 1943.....	1943	1951
Russell, Charles Richard, (Hon.), I, Box 173, Granite Falls; Univ. Coll. of Med., Richmond, 1909.....	1909	1918
Templeton, Ralph Gordon, GP, Blackwelder Hospital, Lenoir; Duke, 1942.....	1946	1946
Thompson, Charles Robert, S, 112 N. Boundary St., Lenoir; Univ. of Va., 1947.....	1947	1954
Thompson, Fred A., I, 351 S. Mulberry St., Lenoir; Duke, 1946.....	1947	1952
Troutman, Baxter Suttles, GP, Dula Hospital, Lenoir; Univ. of Md., 1936.....	1936	1939
Wilson, Clarence L., (Hon.), GP, 212 N. Main St., Lenoir; Chattanooga Med. Coll., 1903.....	1903	1905

CAMDEN—SEE PASQUOTANK—CAMDEN—CURRITUCK—DARE

CARTERET COUNTY SOCIETY¹²

OFFICERS—President: Salter, Theodore, (Biog. below), Beaufort		
Secretary: Brady, W. M. (Biog. below), Morehead City		
†Bonner, Kemp Plummer Battle, (Hon.), GP, 1601 Arendell St., Morehead City; Med. Coll. of Va., 1905.....		
Brady, Walter Morris, GP, 1015 Arendell St., Morehead City; Med. Coll. of Va., 1951.....	1952	1953
Fulcher, Luther, GP, Box 308, Beaufort; Med. Coll. of S. C., 1937.....	1937	1948
Hatcher, Samuel W., GP, 102 S. 21st Street, Morehead City; N. Y. Univ., 1942.....	1942	1947
Hyde, Frank Edward, GP, Retired, Box 3315, Univ. Station, Tucson, Arizona; Western Reserve Univ., 1920.....	1925	1926
Mason, Manly, (Hon.), GP, P.O. Box 23, Newport; Tulane, 1924.....	1924	1925
Maxwell, Clarence Schuyler, (Hon.), I, 111 Pollock Street, Beaufort; Univ. of the South, 1900.....	1899	1904
Moore, Laurie Walker, GP, Beaufort; Med. Coll. of Va., 1931.....	1931	1933
Morey, Milton B., GP & S, 1109 Arendell St., Morehead City; Univ. of Rochester, 1941.....	1944	1946
Morris, John Watson, S & G, 900 Shepard St., Morehead City; Univ. of Va., 1936.....	1938	1938
Peacock, Harold Monroe, S. Sealevel Community Hosp., Sealevel; Duke, 1946.....	1953	1954
Royal, Benjamin F., (Hon.), S. Box 628, 907 Evans Street, Morehead City; Jefferson, 1909.....	1909	1912
Salter, Theodore, GP, Box 58, Beaufort; Med. Coll. of S. C., 1941.....	1941	1946
Thompson, Sanford Webb, Jr., (Hon.), GP, 103 S. 11th St., Morehead City; Medical College of Virginia, 1913.....	1915	1917
Thorne, S. O., Jr., OALR, 101 S. Eleventh St., Morehead City; Duke, 1946.....	1950	1952
Way, John E., S, Beaufort; Univ. of Md., 1938.....	1938	1947
Webb, Herbert F., GP & S, Sealevel Community Hospital, Sealevel; Medical College of Virginia, 1942.....	1953	1954

CASWELL—SEE ALAMANCE—CASWELL

CATAWBA COUNTY SOCIETY¹³

OFFICERS—President: Stewart, Dan, (Biog. below), Hickory		
Secretary: Abernethy, Joe, (Biog. below), Hickory		
Abernethy, Joseph W., I, 343 Second Street, N. W., Hickory; Bowman Gray, 1945.....	1945	1951
Barnes, Henry Eugene, Jr., GP, Box 687, Hickory; Univ. of Md., 1935.....	1935	1938
Bisanar, James Milton, Pd, U. S. Army Dispensary, Ft. Myer, Arlington 11, Va., Univ. of Md., 1948.....	1952	1953
Caldwell, Lawrence McClure, GP, Box 567, East First St., Newton; Univ. of Penn., 1932.....	1932	1934
Clarke, William Lowe, Jr., GP, 829 Eighth Ave., N. E., Hickory; Emory Univ., 1941.....	1947	1948
Cloninger, Charles Edgar, GP, P.O. Box 245, Conover; Univ. of Md., 1941.....	1941	1943
Cloninger, Kenneth Lee, ALR, Catawba Hospital, Inc., Newton; Univ. of Md., 1931.....	1931	1933
Cochrane, James Daniel, (Hon.), GP, 1 East A Street, Newton; Univ. of Md., 1912.....	1912	1923
Cutchin, Joseph Henry, Jr., GP, Sherrill's Ford; Duke, 1942.....	1943	1943
Davis, John Woodrow, GP, N. C. Baptist Hosp., Winston-Salem; Jefferson, 1946.....	1947	1950
Evans, Otis Druell, Jr., GP, 247 Charlotte St., Asheville; Univ. of Md., 1951.....	1952	1953
Fritz, William Abel, GP, 124 N. Center Street, Hickory; Temple, 1933.....	1933	1934
Frye, Glenn Raymer, (Hon.), S, 420 N. Center Street, Hickory; Jefferson, 1921.....	1921	1923
Gast, Charlotte Marie, GP, 353 First Ave., N.W., Hickory; Univ. of Rochester, 1934.....	1942	1943
Goodman, Benjamin W., GP, 226 Fifth St., S. E., Hickory; Univ. of Tenn., 1951.....	1954	1954
Griffin, Harold Walker, OALR, Box 2428, 342 Second St., N.W., Hickory; Emory, 1923.....	1931	1932
Hambrick, Robert T., (Hon.), GP, 3 Third Avenue, N. W., Hickory; Tulane Univ., 1923.....	1923	1924
Jones, Frank Woodson, S, Catawba Hospital, Newton; Med. Coll. of Va., 1934.....	1939	1940
Keever, James Woodfin, GP, 9 Main Ave., S. W., Hickory; Med. Coll. of Va., 1927.....	1927	1930
Lafferty, John William, Pd, 12 Second Avenue, N. E., Hickory; Tulane, 1946.....	1951	1951
Lewis, John Sumter, S, 105 First Avenue, N. W., Hickory; Med. Coll. of S. C., 1925.....	1927	1932
Leonard, Walter Evan, GP, 130 27th St., S. W., Hickory; Bowman Gray, 1953.....	1953	1954
Long, Frederick Yount, (Hon.), GP, Box 36, Catawba; N. C. Med. Coll., 1898.....	1898	1904
Long, Glenn, (Hon.), GP, Box 268, Newton; N. C. Med. Coll., 1912.....	1912	1915
Long, Thomas Walter, GP, Box 109, Newton; Emory, 1935.....	1935	1936
MacLauchlin, William Thompson, GP, Box 245, Conover; Med. Coll. of S. C., 1941.....	1946	1947
Ormond, Allison Lee, GP, 202-A Union Square, Hickory; Jefferson, 1930.....	1930	1935
Peeler, Forrest Edwards, GP, Maiden; Med. Coll. of Va., 1950.....	1951	1951

†Deceased

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Rabold, Bernard Louis, S, Catawba General Hospital, Newton; Vanderbilt, 1938.....	1947	1948
Rayle, Wiley Wallace, GP, 130th Station Hosp., APO 403 c/o P. M., New York, N. Y.; Bowman Gray, 1947.....	1949	1950
Scott, Benton V. D., PH, Catawba Co. Health Dept., Hickory; Northwestern, 1918.....	1952	1953
Shuford, Jacob Harrison, S, 7 Main Ave., S. W., Hickory; Univ. of Penn., 1936.....	1936	1942
Sinclair, Carter A., GP, 214 N. Center Street, Hickory; Univ. of Va., 1952.....	1954	1954
Sinnett, John Franklin, GP, 120 N. Main Street, Newton; Med. Coll. of Va., 1945.....	1945	1952
Speers, Rex W., GP, Claremont; Univ. of Utah, 1942.....	1950	1950
Stewart, Daniel Niven, Jr., GP, 3 Third Ave., N.W., Hickory; Univ. of Penn., 1935.....	1935	1938
Stewart, Roy Allen, Oph, Catawba Hospital, Newton; Emory, 1940.....	1946	1948
Summers, J. Dent, S, 420 N. Center Street, Hickory; Univ. of Penn., 1939.....	1939	1947
Trivette, Parks Dewitt, Pd, 12 Second Avenue, N. E., Hickory; Bowman Gray, 1946.....	1946	1951
Whaley, James Davant, U, 420 N. Center Street, Hickory; Med. Coll. of S. C., 1925.....	1927	1936
Williams, Thomas Richard, Jr., GP, 124 Center Street, Hickory; Univ. of Md., 1943.....	1943	1947
Young, Joseph A., GP, 311 N. Main Avenue, Newton; Med. Coll. of S. C., 1938.....	1938	1945

CHATHAM COUNTY SOCIETY¹⁴

OFFICERS—President: Earle, J. B., (Biog. below), Siler City Secretary: Mathiesen, K. M., (Biog. below), Pittsboro		
Baxley, Raiford Douglas, S, 101½ East Raleigh Street, Siler City; Univ. of Chicago, 1940.....	1940	1948
Byerly, Claude Henry, GP & Ob, 107 S. Chatham Avenue, Siler City; Temple, 1943.....	1948	1948
Earle, Jesse Burns, GP & Ob, 128 S. Chatham Ave., Siler City; Med. Coll. of Va., 1935.....	1935	1938
Gibson, Mack Wilson, ObG & GP, P. O. Box 735, Goldston; Med. Coll. of Va., 1925.....	1925	1947
Jacques, Robert Samuel, GP, Mathiesen Clinic, Pittsboro; Coll. of Med. Evang., 1953.....	1954	1955
Lindley, Joseph J., GP, S. Chatham Street, Siler City; Coll. of Med. Evang., 1952.....	1952	1952
Mathiesen, Kenneth Marlin, GP, Box 985, 17 West St., Pittsboro; Coll. of Med. Evangelists, 1937.....	1938	1939
Patman, William Louis, S, 229 E. Raleigh Street, Siler City; Harvard, 1921.....	1923	1926
Pleasants, George D., GP, 136 N. Chatham Ave., Siler City; Med. Coll. of Va., 1942.....	1942	1945
Wrenn, Grover Cleveland, OALR, 229 E. Raleigh Street, Siler City; Med. Coll. of S. C., 1937.....	1937	1939

CHEROKEE COUNTY SOCIETY¹⁵

OFFICERS—President: Rodda, John S., (Biog. below), Andrews Secretary: Blalock, Floyd E., (Biog. below), Andrews		
Blalock, Floyd E., GP, Andrews; Univ. of Tenn., 1951.....	1953	1954
Hoover, William Alonzo, S, Petrie Hospital, Murphy; Univ. of Md., 1933.....	1933	1938
Miller, Harry, GP, Box 146, Murphy; Emory, 1934.....	1936	1938
Rodda, John Sidney, GP, Rodda-Van Gorder Hospital, Andrews; Univ. of Oregon, 1940.....	1946	1946
Size, George Franklin, GP, Murphy; Univ. of Tenn., 1950.....	1954	1955
Taylor, Frank Victor, OALR, Murphy Gen. Hosp., Murphy; N. C. Med. Coll., 1915.....	1915	1936
Van Gorder, Charles Oscar, S & GP, Rodda-Van Gorder Hosp., Andrews; Univ. of Tenn., 1939.....	1946	1946
Wells, Helen Lewis, GP, Petrie Hospital, Murphy; Bowman Gray, 1946.....	1947	1948
Whitfield, Bryan Watkins, GP & S, Murphy General Hospital, Murphy; Tulane, 1920.....	1934	1936

CHOWAN-PERQUIMANS COUNTIES SOCIETY¹⁶

OFFICERS—President: Vaughan, Roland H., (Biog. below), Edenton Secretary: Hardin, Richard, (Biog. below), Edenton		
Brinn, Thomas Preston, GP, 25 Market Street, Hertford; Univ. of Penn., 1923.....	1923	1927
Davenport, Carlton Alderman, GP, 22 Market Street, Hertford; Univ. of Md., 1924.....	1924	1926
Hardin, Richard Henry, GP, Westover Heights, Box 469, Edenton; Bowman Gray, 1946.....	1946	1954
Hoggard, William Alden, (Hon.), GP, Hertford; Med. Coll. of Va., 1907.....	1907	1910
Powell, Jesse Averette, (Hon.), GP, Edenton; Coll. of P. & S., Baltimore, 1907.....	1908	1909
Stanton, Allie McLeod, S, Chowan Hospital, Box 230, Edenton; Univ. of Tenn., 1943.....	1951	1953
Vaughan, Roland Harris, GP, Citizens Bank Building, Edenton; Univ. of Va., 1935.....	1938	1939
Ward, Ivie Alphonso, (Hon.), OALR, Box 315, Hertford; Univ. of N. C., 1907.....	1907	1915
Williams, Leonidas Polk, (Hon.), GP, 108 E. King St., Edenton; N. Y. Univ., 1918.....	1919	1920
Wisely, Martin Robert, GP, Box 103, Edenton; Univ. of Va., 1935.....	1937	1938
Wood, Frank, S, Chowan Hospital, Edenton; Univ. of Penn., 1928.....	1931	1932

CLAY—SEE MACON-CLAY

CLEVELAND COUNTY SOCIETY¹⁷

OFFICERS—President: Moore, D. F., (Biog. below), Shelby Secretary: Thompson, H. C., (Biog. below), Shelby		
Anthony, James Edward, (Hon.), GP, 137 West Mountain Street, Kings Mountain; Univ. of Tenn., 1911.....	1911	1912
Bliss, Forrest Edgar, GP, Drawer G, Lawndale; Coll. of Med. Evangelists, 1933.....	1933	1934
Bowles, Richard M., Pd, Children's Clinic, Shelby; Duke, 1951.....	1953	1955
Boyles, Wayne, F., GP, Lawndale; Univ. of St. Louis, 1952.....	1952	1954
Bridges, Dwight Thomas, GP, Lattimore; Emory University, 1926.....	1926	1928
Cloninger, Rowell C., S, Box 1345, Shelby; Univ. of Md., 1944.....	1945	1951

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Crawley, Sam J., Jr., GP, Gardner-Webb Health Center, Boiling Springs; Bowman Gray, 1951.....	1951	1953
Crowe, John Buren, GP, 517 A.F.A. Bn. Med. Det., APO 165, New York, N. Y.; Bowman Gray, 1948.....	1949	1950
Eaker, Ralph G., U, 610 Lincoln Avenue, Shelby; Duke, 1945.....	1945	1951
Falls, Fred, GP, Shelby; Tulane, 1930.....	1930	1933
Gold, Ben, Pd, Retired, Shelby; Univ. of Md., 1920.....	1920	1922
Hamrick, John Carl, GP, P.O. Box 28, Shelby; Univ. of Md., 1935.....	1935	1940
Harbison, John William, (Hon.), S, Professional Bldg., Shelby; Johns Hopkins, 1919.....	1919	1924
Hendricks, Paul Eugene, GP, Box 829, Kings Mountain; Bowman Gray, 1946.....	1947	1948
Hunter, John B., S & GP, 616 E. Marion Street, Shelby; Bellevue Univ. and Hosp. Med. Coll., 1928.....	1932	1947
Jervey, William St. Julien, R, Shelby Hospital, Shelby; Temple, 1939.....	1939	1942
Johnson, Julius D., OALR, 314 S. Washington Street, Shelby; Univ. of Ga., 1924.....	1930	1946
Jones, Craig S., S, Professional Bldg., Shelby; Indiana Univ., 1936.....	1937	1938
Kendall, Benjamin Horton, C, Shelby Medical Center, Shelby; Univ. of Md., 1929.....	1929	1931
King, Edward Sandling, Pd & Bact, 314 S. Washington Street, Shelby; Jefferson, 1927.....	1927	1930
Lampley, Charles Gordon, ObG, Prof. Bldg., Box 64, Shelby; Bowman Gray, 1946.....	1946	1947
Lane, James Monroe, GP, Hendricks-Lane Clinic, Kings Mountain; Med. Coll. of S. C., 1953.....	1954	1954
Lattimore, Everett Beam, (Hon.), GP, Box 217, Shelby; Bellevue Med. Coll., 1897.....	1896	1904
Maybin, Richard M., GP, Drawer M, Lawndale; Med. Coll. of S. C., 1946.....	1946	1952
McGill, John C., GP, Kings Mountain; Vanderbilt, 1946.....	1950	1952
McGill, Kenneth H., GP, Box 389, Kings Mountain; Vanderbilt, 1952.....	1954	1954
McMurray, Clarence M., I, Shelby; Bowman Gray, 1946.....	1947	1953
McMurry, Avery Willis, S, 511 S. Washington Street, Shelby; Jefferson, 1945.....	1945	1951
Mitchell, Thomas Brice, GP, (Retired), Shelby; Univ. of Penn., 1924.....	1925	1927
Mitchell, Zack Perry, (Hon.), PH, Box 138, Shelby; Med. Coll. of Va., 1920.....	1920	1921
Moore, D. Forrest, ObG, 216 S. Washington Street, Shelby; Jefferson, 1925.....	1925	1927
Nolan, Paul Vernon, GP, Kings Mountain; Univ. of Md., 1948.....	1948	1950
Padgett, Charles King, ObG, Shelby Medical Clinic, Shelby; Jefferson, 1930.....	1930	1934
Padgett, Philip Grover, GP, Box 107, 101 West King St., Kings Mountain; Tulane, 1935.....	1936	1940
Parker, Shepherd Falkener, GP, Box 102, 2½ E. Warren St., Shelby; Med. Coll. of Va., 1929.....	1929	1931
Ramseur, William Lee, GP, Box 428, Kings Mountain; Med. Coll. of S. C., 1926.....	1927	1929
Sarazen, Paul M., Jr., Pd, Children's Clinic, Shelby; Duke, 1948.....	1950	1955
Schenck, Sam Moore, S, Retired, Shelby; Univ. of Penn., 1923.....	1923	1926
Sherrill, Herbert Rankin, GE, Royster Bldg., Shelby; Univ. of Tenn., 1926.....	1926	1927
Thompson, Heyward Chevis, GP, Box 202, Shelby; Tulane, 1930.....	1931	1932
Washburn, Willard Wyan, GP, Boiling Springs; Jefferson, 1943.....	1943	1947
Yeomans, Merrill B., GP, Lineberger Bldg., Shelby; Univ. of Minn., 1951.....	1952	1954

COLUMBUS COUNTY SOCIETY¹⁸

OFFICERS—President: Bunn, D. G., (Biog. below), Whiteville Secretary: Futch, W. A., (Biog. below), Chadbourn		
Baldwin, William Edwin, Jr., GP, Whiteville; Duke, 1942.....	1946	1946
Barefoot, William Frederick, S, 7 Thompson Street, Whiteville; Tulane, 1934.....	1934	1935
Betha, Thad, GP, Fair Bluff; Bowman Gray, 1950.....	1950	1954
Black, John Riley, Jr., GP, P.O. Box 126, Whiteville; Duke, 1938.....	1942	1943
Bunn, David Glenn, GP, Box 23, E. Main St., Whiteville; Univ. of Md., 1947.....	1947	1949
Chesley, Norman K., GP, Box 68, Acme; Tufts College, 1928.....	1928	1954
Floyd, Anderson Gayle, GP, 605 S. Madison St., Whiteville; Med. Coll. of S. C., 1937.....	1937	1939
Floyd, Lawrence Dowe, (Hon.), GP, Fair Bluff; N. C. Med. Coll., 1911.....	1911	1912
Futch, William Alexander, GP, Box 454, Chadbourn; N. Y. Med. Coll., 1953.....	1953	1955
Greene, William Alexander, GP, 104 E. Commerce Street, Whiteville; Northwestern Univ., 1934.....	1935	1936
Harrelson, Rose Cranse, Jr., GP, Box 588, Tabor City; Jefferson, 1945.....	1945	1949
Hoskins, William Hume, I, Main Street, Whiteville; Med. Coll. of Va., 1931.....	1946	1946
Johnson, Floyd, (Hon.), PH, Columbus County Health Dept., Whiteville; Memphis H. M. C., 1903.....	1903	1904
Johnstone, Allan MacKenzie, GP, P. O. Box 22, Wananish; Tulane, 1953.....	1954	1955
Lewis, Martin T., GP, Tabor City; N. Y. Med. Coll., 1953.....	1954	1955
Miller, Warren Edwin, S, 7 N. Thompson Street, Whiteville; Emory, 1929.....	1934	1935
Sadler, Ralph Calvert, (Hon.), I, 613 S. Madison St., Whiteville; N. C. Med. Coll., 1912.....	1912	1915
Smith, Slade Alvah, (Hon.), OALR, Whiteville; N. C. Med. Coll., 1907.....	1907	1921
Williamson, Rossie Marshall, GP, Box 497, 23 W. 5th St., Tabor City; Univ. of Penn., 1937.....	1937	1940
Wyche, Joseph Thomas, GP, 613 S. Madison St., Whiteville; Univ. of Penn., 1941.....	1941	1948

CRAVEN COUNTY SOCIETY¹⁹

OFFICERS—President: Patterson, F. M. Simmons, (Biog. below), New Bern Secretary: Millns, Dale T., (Biog. below), New Bern		
Ashford, Charles Hall, S, 603 Pollock Street, New Bern; Johns Hopkins, 1927.....	1927	1931
Barden, Graham A., Jr., Pd, 414 Johnson Street, New Bern; Duke, 1944.....	1948	1953
Barefoot, Julius J., GP, 519 Broad Street, New Bern; George Washington Univ., 1950.....	1951	1952

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Barefoot, Verna Y., GP, 519 Broad Street, New Bern; George Washington Univ., 1951	1951	1953
Barker, Christopher Sylvanus, (Hon.), GP, 711 Broad Street, New Bern; Jefferson, 1909	1909	1924
Bell, William Harrison, Jr., R, 2015 Center Avenue, New Bern; Cornell, 1946.....	1946	1953
Connor, Charles David, GP, 22 Rose Court, Havelock; Geo. Wash. Univ., 1953.....	1954	1955
Davidson, Alan, OALR, P. O., Box 1313, New Bern; Univ. of Vermont, 1943.....	1948	1948
Davis, Junius W., Jr., Pd, 315 Craven St., New Bern; Med. Coll. of S. C., 1946.....	1946	1951
Disosway, Lulu M., ObG, Good Shepherd Hospital, New Bern; Woman's Med. Coll., 1925	1925	1955
Duffy, Charles, Pd & I, 607 Pollock Street, New Bern; Jefferson, 1930.....	1930	1935
+Duffy, Richard Nixon, (Hon.), S, 517 Craven Street, New Bern; Johns Hopkins, 1906	1907	1908
Erdman, Lawrence Huntington, S, 206 S. Front St., New Bern; Columbia Univ., 1946	1953	1954
Grady, Franklin M., GP, Box 1087, New Bern; Syracuse Univ., 1932.....	1932	1934
Hammond, Alfred Franklin, Jr., GP, 412 Broad Street, New Bern; Jefferson, 1934.....	1934	1937
Hardin, Eugene D., PH, Health Dept., P.O. Box 1290, New Bern; Tulane, 1917.....	1950	1950
Hollister, William, GP, P. O. Box 1107, New Bern; Univ. of Md., 1922.....	1922	1942
King, Francis P., I, 509 Middle Street, New Bern; Harvard, 1946.....	1946	1953
Little, Henry Reece, GP, 606 Pollock Street, New Bern; Med. Coll. of Va., 1951.....	1953	1953
Little, Suzanne Brown, I, 606 Pollock Street, New Bern; Med. Coll. of Va., 1949.....	1953	1953
Millns, Dale Thomas, U, Box 664, Clark Bldg., New Bern; Western Reserve Univ., 1946	1953	1953
Patterson, F. M. Simmons, S, 1412 Rhem Ave., New Bern; Univ. of Penn., 1939.....	1939	1947
Patterson, Joseph F., S, P.O. Box 814, 1402 Rhem Ave., New Bern; Harvard, 1942.....	1942	1951
Richardson, Ernest Christopher, Jr., ObG, 413 Pollock St., New Bern; Jefferson, 1943	1943	1948
Wadsworth, Harvey Bryan, (Hon.), ObG, 517 Broad Street, New Bern;		
Johns Hopkins, 1918.....	1918	1923
Willis, Carroll Vance, GP, New Street, P. O. Box 248, Vanceboro; Jefferson, 1934.....	1934	1953
Willis, William Henry, Jr., GP, Box 69, New Bern; Med. Coll. of Va., 1939.....	1939	1942

CUMBERLAND COUNTY SOCIETY²⁰

OFFICERS—President: Currie, D. S., Jr., (Biog. below), Fayetteville		
Secretary: Morgan, A. E., (Biog. below), Fayetteville		
Allgood, Reese Alexander, (Hon.), GP, Liberty, S. C.;		
Univ. of Md. & Coll. of P. & S., Baltimore, 1912.....	1915	1917
Baggett, Joseph W., ObG, 911 Hay Street, Fayetteville; Univ. of Md., 1945.....	1945	1951
Baluss, John William, Jr., Or, 232 Ray Ave., Fayetteville; Univ. of Mich., 1940.....	1950	1951
Breeden, William Henry, Pd, 1606 Morganton Road, Fayetteville;		
Med. Coll. of the State of S. C., 1938.....	1941	1946
Campbell, Paul C., D, 327 Ray Avenue, Fayetteville; Univ. of Buffalo, 1936.....	1950	1950
Cogdell, David Melvin, ObG, 911 Hay Street, Fayetteville; Med. Coll. of Va., 1938.....	1938	1940
Cook, William Eugene, I & T, Veterans Hospital, Fayetteville; Wash. Univ., 1930.....	1930	1934
Currie, Daniel Smith, Sr., (Hon.), GP, Box 108, Parkton; N. C. Med. Coll., 1906.....	1906	1906
Currie, Daniel Smith, Jr., OALR, 302 Old Street, Fayetteville; Jefferson, 1936.....	1936	1941
Davis, Grayson, GP, Hope Mills; Cornell, 1951.....	1952	1954
Elfmom, Samuel Leon, I, 225 Green Street, Fayetteville; Med. Coll. of Va., 1935.....	1936	1937
Farmer, William Anderson, S, 107 Bradford Ave., Fayetteville; Vanderbilt Univ., 1930	1937	1941
Foster, Malcolm Tennyson, PH & T, Box 470, Fayetteville; Emory, 1927.....	1927	1930
Garber, E. C., Jr., ObG, 1256 Fort Bragg Rd., Fayetteville; Med. Coll. of Va., 1944.....	1947	1950
Godwin, Harold L., I, 206 Park Street, Fayetteville; Harvard, 1947.....	1947	1953
Harris, Grace Swinburne, GP, 809 Westmont Drive, Fayetteville;		
Women's Med. Coll. of Penn., 1930.....	1949	1949
Harry, John McKamie, S, Highsmith Hosp., Fayetteville; Med. Coll. of Va., 1934.....	1934	1936
Herman, John D., GP, #8 Market Square, Fayetteville; Bowman Gray, 1951.....	1951	1955
Highsmith, Wm. Cochran, I, Highsmith Hosp., Fayetteville; Univ. of Cincinnati, 1931	1930	1932
Hurdle, Thomas G., U, 327 Ray Avenue, Fayetteville; Med. Coll. of Va., 1945.....	1945	1955
Jordan, John Alfred, Jr., S, Highsmith Hosp., Fayetteville; Jefferson, 1946.....	1950	1950
Jordan, Weldon H., I, 114 Broadfoot Avenue, Fayetteville; Harvard, 1947.....	1947	1955
Kelly, Richard Sterling, Jr., Pd, 1606 Morganton Rd., Fayetteville; Jefferson, 1945.....	1945	1950
King, Robert W., I, 107 Bradford Avenue, Fayetteville; George Wash. Univ., 1942.....	1942	1947
Langdon, B. Bruce, U, 327 Ray Avenue, Fayetteville; Jefferson, 1938.....	1938	1952
McFadyen, Oscar Lee, Jr., I, 123 Anderson Street, Fayetteville; Duke, 1940.....	1941	1942
McKay, William Peter, (Hon.), OALR, 809 Arsenal Ave., Fayetteville; Tulane, 1916.....	1916	1921
McLean, James Wilton, I, 115 Bow Street, Fayetteville; N. Y. Univ., 1943.....	1946	1949
McLeod, Junius Hazel, GP, Fayetteville; S. C. Med. Coll., 1926.....	1929	1929
MacRae, John Donald, R, 815 Arsenal Avenue, Fayetteville; Univ. of Penn., 1927.....	1927	1930
Miller, Horace William, GP, 6 Market Square, Fayetteville; Bowman Gray, 1951.....	1951	1953
Monroe, Daniel Geddies, GP, 104 Highland Avenue, Fayetteville; Jefferson, 1939.....	1939	1943
Morgan, Arthur E., R, 234 Ray Avenue, Fayetteville; Jefferson, 1929.....	1936	1947
Morrison, Robert H., ObG, 1256 Ft. Bragg Rd., Fayetteville; Univ. of Va., 1944.....	1944	1955
Owen, Duncan Shaw, I, 1920 Ft. Bragg Rd., Fayetteville; Univ. of Md., 1930.....	1930	1933
Parker, Wade Thomas, S & Ind, Pittman Hosp., Fayetteville; Med. Coll. of S. C., 1928	1931	1933
Pittman, Raymond Lupton, (Hon.), S, Pittman Hosp., Fayetteville; Jefferson, 1910.....	1910	1912
Pittman, William Austin, OALR, 423 Hay Street, Fayetteville; Temple, 1932.....	1932	1934
Raney, William Thomas, Sr., (Hon.), I, 107 Bradford Avenue, Fayetteville;		
Univ. Coll. of Med., Richmond, 1913.....	1913	1916
Robertson, John Newton, (Hon.), OALR, Pittman Hospital, Fayetteville;		
Med. Coll. of Va., 1923.....	1923	1924

†Deceased

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Shaw, John Alexander, Pd, 1606 Morganton Rd., Fayetteville; Univ. of Penn., 1923.....	1923	1926
Siewers, Christian Fogle, Or, 201 Churchill Drive, Fayetteville; Med. Coll. of Va., 1944.....	1950	1950
Snipes, Richard Dean, ObG, 809 Arsenal Avenue, Fayetteville; Duke, 1942.....	1945	1946
Stewart, Albert, Jr., I, 114 Broadfoot Ave., Fayetteville; Wash. Univ., 1944.....	1948	1950
Verdery, William Carey, (Hon.), Pd, 437 Hay St., Fayetteville; Univ. of Ga., 1915.....	1920	1921
Worden, Neil, GP, Hope Mills General Hospital, Hope Mills; Univ. of Louis., 1951.....	1951	1955
Wright, Samuel Martin, Pd, 1606 Morganton Rd., Fayetteville; Univ. of Penn., 1946....	1947	1955

CURRITUCK—SEE PASQUOTANK—CAMDEN—CURRITUCK—DARE

DARE—SEE PASQUOTANK—CAMDEN—CURRITUCK—DARE

DAVIDSON COUNTY SOCIETY²¹

OFFICERS—President: Redwine, J. D., (Biog. below), Lexington		
Secretary: Morgan, Richard Y., (Biog. below), Lexington		
Alexander, George Thomas, S, 20 W. Guilford Street, Thomasville; Emory, 1922.....	1933	1934
Andrew, John Montgomery, R, 3½ N. Main Street, Lexington; N. Y. Univ., 1932.....	1932	1934
Bingham, William Louis, GP, 15 E. Center Street, Lexington; Bowman Gray, 1946.....	1946	1949
Block, Milton Edward, GP, 522 S. State Street, Lexington; Tulane, 1933.....	1933	1937
Cathell, Edwin Jennings, S, 16 W. First Avenue, Lexington; Emory, 1930.....	1930	1932
Clyatt, Claude Eugene, (Hon.), GP, Box 123, Denton; Univ. of Ga., 1911.....	1923	1924
Covington, Furman Payne, GP, 2 Salem Street, Thomasville; Jefferson, 1939.....	1939	1946
Craven, Jean Davidson, Pd, 19 W. Third Avenue, Lexington; Johns Hopkins, 1930.....	1933	1935
Farrington, Reno Kirby, S, 16½ W. Main Street, Thomasville; Univ. of Cinn., 1925.....	1925	1927
Gambrell, Grover Cleveland, (Hon.), PH, Retired, Box 522, Lexington;		
Univ. of Ga., 1912.....	1923	1924
Gilliam, Charles Franklin, GP, 54 Salem Street, Thomasville; Univ. of Md., 1952.....	1952	1954
Gobel, William Ken, GP, Box 232, Denton; Bowman Gray, 1952.....	1952	1954
Griffis, John William, GP, Denton; Med. Coll. of Va., 1932.....	1934	1937
Hankins, Joseph Banks, ObG, 20 W. Fifth Avenue, Lexington; Bowman Gray, 1943.....	1943	1950
Highsmith, George Perry, I, 52 Salem Street, Thomasville; Bowman Gray, 1946.....	1946	1950
Humphrey, Edward M., GP, Route 3, Lexington; Bowman Gray, 1952.....	1952	1954
Hunt, William Bryce, (Hon.), GP, 23 E. Center Street, Lexington; Univ. of Md., 1923....	1923	1924
Lanier, Verne Clifton, GP, P.O. Box 368, Welcome; Med. Coll. of Va., 1937.....	1937	1939
Leonard, Jacob Calvin, Jr., OALR, Box 566, Lexington; Jefferson, 1928.....	1928	1931
Lohr, Dermot, GP, 15 E. Center Street, Lexington; Jefferson, 1934.....	1934	1938
Long, Rowland V., I, 17 Randolph Street, Thomasville; Bowman Gray, 1946.....	1947	1948
McDonald, Robert Lacy, GP, 22 Trade Street, Box 327, Thomasville;		
Northwestern Univ., 1936.....	1937	1938
Meade, Forest Chauncey, S, 21 East Center Street, Lexington; Univ. of Md., 1940.....	1947	1947
Mock, David Carlton, GP, R.F.D. 3, Lexington; Bowman Gray, 1946.....	1946	1950
Mock, Frank Lowe, (Hon.), GP, Box 120, Lexington; N. C. Med. Coll., 1908.....	1908	1908
Morgan, Richard Young, I, 21 East Center Street, Lexington; Med. Coll. of Va., 1947.....	1953	1954
Phillips, Marvin Worth, GP, 54 Salem Street, Thomasville; Med. Coll. of Va., 1945.....	1945	1949
Redwine, James Daniel, ObG, Court Square, Lexington; Emory, 1931.....	1931	1934
Sharpe, Charles Ray, (Hon.), OALR, 23 W. Second Street, Box 474, Lexington;		
Jefferson, 1914.....	1914	1917
Sherrill, Phil Minnis, S, 50 Salem Street, Thomasville; Vanderbilt, 1931.....	1935	1937
Smith, David Clark, GP, West Third Street, Lexington; Bowman Gray, 1943.....	1944	1948
Smith, Pennington Foyle, GP, 15 E. Center St., Lexington; Wash. Univ., St. Louis, 1943.....	1943	1945
Smith, J. Alexander, (Hon.), S, (Retired), Lexington; N. C. Med. Coll., 1915.....	1915	1917
Smith, William Gordon, S, 17 Randolph Street, Box 546, Thomasville; Tulane, 1927.....	1927	1928
Snider, Bobby Eugene, GP, Welcome; Bowman Gray, 1953.....	1954	1954
Varner, John Wesley, PH, c/o Davidson County Health Dept., Lexington;		
Univ. of Tenn., 1932.....	1932	1953
Welborn, James Todd, GP, 15 East Second Avenue, Lexington; Univ. of Md., 1948.....	1948	1950

DAVIE—SEE ROWAN—DAVIE

DUPLIN COUNTY SOCIETY²²

OFFICERS—President: Bolin, Paul, (Biog. below), Beulaville		
Secretary: Ewers, Edwin P., (Biog. below), Warsaw		
Blair, James Seaborn, Jr., GP, 119 E. Boney St., Wallace; Univ. of Md., 1947.....	1947	1950
Bolin, Paul, GP, Beulaville; Med. Coll. of S. C., 1945.....	1946	1954
Ewers, Edwin Patterson, GP, 105 East Hill Street, Warsaw; Med. Coll. of Va., 1935.....	1936	1939
Glascok, Donald W., GP, Newton Bldg., Faison; Med. Coll. of Va., 1952.....	1952	1954
Hawes, Charles Forest, GP, Box G, Rose Hill; Northwestern Univ., 1933.....	1932	1939
Heath, Hunter, GP, Chinquapin; McGill Univ., 1943.....	1947	1948
Hundley, Deane, Jr., GP, Box 592, 219 E. Main St., Wallace; Boston Univ., 1934.....	1936	1938
Kornegay, Grey Bryan, GP, Railroad Street, Wallace; Duke, 1950.....	1952	1952
Matthews, George P., GP, Rose Hill; Temple, 1943.....	1943	1947
Matthews, Otto S., GP, P.O. Box 26, 101 E. Plank St., Warsaw; Univ. of Md., 1946.....	1946	1951
Norris, Francis Loran, GP, Beulaville; Univ. of Oklahoma, 1936.....	1937	1942
Robinson, John Daniel, (Hon.), GP, Box 486, 321 E. Main St., Wallace;		
Univ. of Md., 1915.....	1915	1917
Straughan, John William, GP, Box 55, 501 E. Hill St., Warsaw; Med. Coll. of Va., 1924.....	1924	1925

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Willis, Robert Fredrick, GP, Box 248, Kanansville; Med. Coll. of Va., 1951.....	1952	1952
DURHAM-ORANGE COUNTIES SOCIETY²³		
OFFICERS—President: Hart, Deryl, (Biog. below), Durham		
Secretary: Bugg, Everett L., Jr., (Biog. below), Durham		
Abse, David Wilfred, P, N. C. Memorial Hospital, Chapel Hill; Nat'l Univ. of Wales, 1938.....	1952	1954
Ader, Ottis Ladeau, PH, Health Department, 300 E. Main Street, Durham; Univ. of Penn., 1925.....	1951	1951
Adkins, Trogler F., ObG, 306 S. Gregson Street, Durham; Duke, 1936.....	1946	1946
Alexander, Sydenham B., I, Univ. of N. C. Hosp., Box 997, Chapel Hill; Med. Coll. of Va., 1944.....	1944	1946
Alyea, Edwin Pascal, U, Duke Hospital, Durham; Johns Hopkins, 1923.....	1930	1930
Anderson, William Banks, Oph, Duke Hospital, Box 3802, Durham; Johns Hopkins, 1924	1927	1928
Andrews, Leon Polk, I, Miller Hall, Chapel Hill; Harvard, 1945.....	1953	1953
Arena, Jay Morris, Pd, 604 W. Chapel Hill Street, Durham; Duke, 1932.....	1938	1939
Arnold, Ralph A., OALR, Duke Hospital, Durham; Univ. of Buffalo, 1936.....	1941	1941
Baker, Lenox Dial, Or, Duke Hospital, Durham; Duke, 1933.....	1937	1937
Baker, Roger D., Path, 303 Swift Ave., Durham; Harvard, 1928.....	1934	1953
Bardin, Robert Malcolm, GP, 302 E. Trinity Ave., Durham; Tulane, 1929.....	1934	1935
Barnes, Robert Henry, P, Duke Hosp., Durham; Duke, 1948.....	1954	1954
Barnett, Thomas B., I, N. C. Memorial Hosp., Chapel Hill; Univ. of Rochester, 1949.....	1952	1952
Batten, Hubert E., R, Apt. 37F, Glen Lennox, Chapel Hill; Med. Coll. of Va., 1951.....	1953	1953
Baum, Ralph Etheridge, I, 212 W. Main Street, Durham; Duke, 1941.....	1946	1950
Baylin, George Jay, R, Box 3516, Duke Hospital, Durham; Duke, 1937.....	1941	1942
Berryhill, Walter Reece, I & Ed, Univ. of N. C. Med. Sch., Chapel Hill; Harvard, 1927	1928	1934
Bever, Christopher T., P, N. C. Memorial Hospital, Chapel Hill; Harvard, 1943.....	1953	1954
Bitting, Numa Duncan, (Hon.), S, 212 W. Main St., Durham; Jefferson, 1907.....	1907	1909
Bloor, Byron Michal, N, 1409 Broad Street, Durham; Duke, 1946.....	1953	1955
Bogdonoff, Morton David, , 1840 Forrest Road, Durham; Cornell, 1948.....	1953	1954
Boone, Alex W., Jr., U, Duke Hospital, Durham; Duke, 1946.....	1949	1952
Boone, William Waldo, (Hon.), GP, 1001 Gloria Avenue, Durham; Jefferson, 1923.....	1923	1925
Bowles, F. Norman, ObG, 306 S. Gregson Street, Durham; Med. Coll. of Va., 1924.....	1924	1926
Bradsher, Arthur B., S, 604 W. Chapel Hill Street, Durham; McGill Univ., 1941.....	1951	1951
Brantly, Clayton, I, 111 Corcoran Street, Durham; Univ. of Va., 1940.....	1953	1954
Brashear, H. Robert, Or, Memorial Hospital, Chapel Hill; Univ. of Calif., 1945.....	1953	1953
Bream, Charles Anthony, R, Sch. of Med., U.N.C., Chapel Hill; Temple, 1940.....	1952	1952
Brinkhous, Kenneth Merle, Ed & Path, U. N. C. Med. Sch., Box 1020, Chapel Hill; Univ. of Iowa, 1932.....	1947	1947
Brown, Ivan W., Jr., S, Duke Hospital, Durham; Duke, 1940.....	1947	1947
Bryan, A. Hughes, PH, School of Public Health, Chapel Hill; Harvard, 1931.....	1947	1948
Bugg, Everett L., Jr., Or, Broad & Englewood, Durham; Johns Hopkins, 1937.....	1946	1946
Bullitt, James Bell, (Hon.), Path, (Retired), Med. Bldg., Chapel Hill; Univ. of Va., 1897	1914	1915
Bunce, Paul Leslie, U, N. C. Mem. Hosp., Chapel Hill; Univ. of Chicago, 1942.....	1952	1952
Burnett, Charles Hoyt, I, U.N.C. Sch. of Med., Chapel Hill; Univ. of Colo., 1937.....	1951	1952
Busse, Ewald W., P, Duke Hospital, Durham; Wash. Univ., 1942.....	1953	1954
Callaway, Jasper Lamar, D, Duke Hospital, Durham; Duke, 1932.....	1937	1937
Carter, Donald Dean, I, 501 11th St. North, St. Petersburg, Fla.; Duke, 1947.....	1952	1954
Carter, Francis Bayard, ObG, Duke Hospital, Durham; Johns Hopkins, 1925.....	1925	1931
Cekada, Emil Bogomir, I, 602 W. Chapel Hill Street, Durham; Johns Hopkins, 1929.....	1934	1934
Chamberlin, Harrie R., Pd, U.N.C. School of Medicine, Chapel Hill; Harvard, 1945.....	1953	1953
Cheek, John Merritt, Jr., S, 306 S. Gregson Street, Durham; Bowman Gray, 1945.....	1945	1952
Chipman, Sidney, S., Pd & Ph, 405 Collidge St., P.O. Box 229, Chapel Hill; McGill Univ., 1928.....	1950	1951
Clark, Henry T., Jr., Ed, Box 1370, Chapel Hill; Univ. of Rochester, 1944.....	1944	1950
Cleaver, H. DeHaven, S, 1202 Broad Street, Durham; Temple, 1944.....	1953	1953
Cohn, Jerome E., I, Bellevue Hosp., New York, N. Y.; Univ. of Md., 1946.....	1953	1954
Collins, John P., S, VA Hospital, Durham; Duke, 1944.....	1948	1953
Connor, Richard Grigsby, S, 4308 Woodmere Rd., Tampa 9, Fla.; Duke, 1944.....	1953	1955
Conrad, Raphael Woodward, Or, Broad & Englewood Sts., Durham; Duke, 1947.....	1950	1955
Cooper, Albert Derwin, T, 300 E. Main Street, Durham; George Wash. Univ., 1931.....	1933	1934
Coppridge, William Maurice, (Hon.), U, 1200 Broad Street, Durham; Jefferson, 1918.....	1919	1920
Craige, Ernest, C & I, U.N.C. Med. School, Chapel Hill; Harvard, 1943.....	1952	1952
Crane, George L., I, 1105½ West Chapel Hill St., Durham; Cornell, 1940.....	1942	1947
Crane, George W., D, 1200 Broad Street, Durham; Northwestern Univ., 1945.....	1949	1949
Creadick, Robert N., ObG, Duke Hospital, Durham; Yale, 1937.....	1946	1947
Cromartie, William James, I, U.N.C. Med. Sch., Dept. of Bact., Chapel Hill; Emory Univ., 1937.....	1937	1943
Curnen, Edward C., Jr., Pd, Memorial Hospital, Chapel Hill; Harvard, 1935.....	1952	1952
Curtis, Thomas E., P, Dept. of Psychiatry, UNC Sch. of Med., Chapel Hill; Duke, 1950	1953	1954
Davidson, James Hubert, I, 604 W. Chapel Hill Street, Durham; Univ. of Va., 1945.....	1949	1950
Davis, David A., Anes, Memorial Hospital, Chapel Hill; Vanderbilt, 1941.....	1952	1953
Davis, James Evans, S, 1200 Broad St., Durham; Univ. of Penn., 1940.....	1943	1951
Davison, Wilburt Cornell, Pd & Ed, Box 3701, Duke Hospital, Durham; Johns Hopkins, 1917.....	1927	1928

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Dees, John Essary, U, Duke Hospital, Durham; Univ. of Va., 1933.....	1940	1940
Dees, Susan Coons, Pd & A, Box 3021, Duke Hospital, Durham; Johns Hopkins, 1935....	1939	1941
Dick, Macdonald, I, Box 3813, Duke Hospital, Durham; Johns Hopkins, 1928.....	1940	1941
Donovan, Daniel Lafayette, I, UNC Sch. of Med., Chapel Hill; Loyola, 1947.....	1954	1954
Dugger, Gordon Shelton, S, N. C. Memorial Hospital, Chapel Hill; Johns Hopkins, 1945	1945	1954
Eagle, Watt Weems, ALR, Duke Hospital, Durham; Johns Hopkins, 1925.....	1929	1930
Easley, Eleanor Beamer, ObG, 604 W. Chapel Hill St., Durham; Duke Univ., 1934.....	1940	1940
Engel, Frank Libman, Ed, I, & Phy, Duke Hospital, Durham; Johns Hopkins, 1938.....	1947	1949
Estes, Edward Harvey, Jr., C, Duke Hospital, Durham; Emory, 1947.....	1953	1953
Ewing, John A., P, N. C. Mem. Hosp., Chapel Hill; Edinburgh, 1946.....	1952	1955
Farmer, Thomas W., N, Dept. Medicine, U.N.C. Med. Sch., Chapel Hill; Harvard, 1941	1952	1952
Fassett, Burton Watson, (Hon.), OALR, 123 W. Main St., Durham; Baltimore Med. Coll., 1898.....	1899	1909
Ferguson, George Burton, ALR, 1110 W. Main Street, Durham; Jefferson, 1932.....	1937	1938
Fetter, Bernard F., Path, Box 3220, Duke Hospital, Durham; Duke, 1944.....	1944	1953
Fields, Leonard Earl, GP, P.O. Box 788, East Franklin St., Chapel Hill; Univ. of Pa., 1929.....	1929	1931
Fischer, Janet Jordan, I, Memorial Hospital, Chapel Hill; Johns Hopkins, 1948.....	1952	1952
Fischer, Newton D., ALR, U.N.C. School of Med., Chapel Hill; Univ. of Texas, 1945.....	1952	1952
Fleming, Ralph Gibson, I, 1200 Broad Street, Durham; Univ. of Penn., 1936.....	1936	1938
Fleming, William LeRoy, Ed & I, U.N.C. Sch. of Med., Chapel Hill; Vanderbilt, 1932....	1940	1940
Flowers, Charles E., Jr., ObG, Memorial Hospital, Chapel Hill; Johns Hopkins, 1944....	1944	1948
Forbus, Wiley Davis, Path, Box 3712, Duke Hospital, Durham; Johns Hopkins, 1923....	1929	1935
Fortin, John Noel, P, Univ. of N. C., Chapel Hill; Montreal, Canada, 1950.....	1954	1955
Fowler, John A., P, 2212 Erwin Rd., Durham; Bowman Gray, 1946.....	1946	1954
Fox, Frances Hull, I, Box 1769, Durham; Univ. of Penn., 1935.....	1940	1942
Fox, Herbert Junius, I, (Retired), P.O. Box 1769, Durham; Duke, 1935.....	1940	1941
Gardner, Clarence Ellsworth, Jr., S, Duke Hospital, Durham; Johns Hopkins, 1928.....	1932	1932
Garvin, O. David, PH, Health Department, Chapel Hill; Med. Coll. of S. C., 1932.....	1946	1947
Georgiade, Nicholas, Pl, Duke Hospital, Durham; Duke, 1950.....	1951	1954
Glasson, John, Or, 306 S. Gregson Street, Durham; Cornell, 1943.....	1951	1951
Goldner, J. Leonard, Or, Duke Hospital, Durham; Univ. of Neb., 1943.....	1950	1950
Goldsmith, Jewett, P, Box 3134, Duke Hospital, Durham; Univ. of Md., 1942.....	1949	1950
Gottschalk, Carl W., C & I, N. C. Memorial Hosp., Chapel Hill; Univ. of Va., 1945.....	1952	1952
Goudge, Mabel Ensworth, P, W. Main Street, Durham; Ohio State Univ., 1922.....	1925	1927
Graham, John Borden, Path & Ed, Box 1020, Chapel Hill; Cornell, 1942.....	1942	1947
Graham, William Alexander, ObG, 620 Vickers Avenue, Durham; Univ. of Penn., 1932....	1932	1937
Grimson, Keith Sanford, S, Duke Hospital, Durham; Rush Med. Coll., 1933.....	1942	1942
Grosskreutz, Doris Clare, Anes, N. C. Memorial Hospital, Chapel Hill; Illinois Univ., 1942.....	1954	1954
Gunter, June U., Path & CP, Watts Hospital, Durham; Jefferson, 1936.....	1936	1947
Ham, George C., P, UNC Med. Sch., Dept. of Psychiatry, Chapel Hill; Univ. of Penn., 1937	1952	1952
Hamblen, Edwin Crowell, Endoc, Duke Hospital, Durham; Univ. of Va., 1928.....	1931	1931
Hansen-Pruss, Oscar Carl Edward, I & A, Duke Hosp., Durham; Johns Hopkins, 1924	1930	1931
Hardee, Walter Person, (Hon.), OALR, 123 W. Main St., Durham; Jefferson, 1912.....	1912	1924
Hare, Roy Allen, I, 1200 Broad St., Durham; Bowman Gray, 1945.....	1945	1950
Hargrove, Eugene A., P, N. C. Memorial Hosp., Chapel Hill; Texas Univ., 1942.....	1954	1954
Harris, Isaac E., Jr., S & Pr, 1200 Broad Street, Durham; Jefferson, 1933.....	1933	1939
Harris, Jerome Sylvan, Pd, Duke Hospital, Durham; Harvard, 1933.....	1940	1947
Hart, Julian Deryl, S, Duke Hospital, Durham; Johns Hopkins, 1921.....	1929	1930
Hawkins, David R., P, N. C. Memorial Hospital, Chapel Hill; Rochester, 1946.....	1952	1952
Hedgpeth, Edward McGowan, I, P.O. Box 87, Chapel Hill; Univ. of Penn., 1931.....	1931	1934
Hendrix, James Paisley, I, Box 3408, Duke Hospital, Durham; Univ. of Penn., 1930.....	1930	1939
Heusner, Albert P., NS, U.N.C. Memorial Hospital, Chapel Hill; Harvard, 1938.....	1952	1953
Heyman, Albert, N, 910 Arrowhead Road, Chapel Hill; Univ. of Md., 1940.....	1954	1955
Hickam, John Bamber, I, Box 3703, Duke Hospital, Durham; Harvard, 1940.....	1947	1948
Hohman, Leslie Benjamin, PN, Duke Medical School, Durham; Johns Hopkins, 1917.....	1946	1947
Holloway, Joseph Clark, GP, 212 W. Main St., Durham; Tulane, 1927.....	1928	1929
Hughes, Jack, U, 1200 Broad Street, Durham; Univ. of Penn., 1943.....	1943	1950
Humphries, Charles O., I, 1200 Broad Street, Durham; Cornell Univ., 1944.....	1944	1951
Ingram, Phyllis Ray, S, 1006 Demerius Street, Durham; Univ. of Md., 1944.....	1953	1953
Izlar, Henry Leroy, Jr., I, 2202 Sprunt St., Durham; Duke, 1948.....	1953	1955
Jessner, Lucie, P, N. C. Memorial Hosp., Chapel Hill; Koenigsberg, Prussia, 1926.....	1955	1955
Johnson, David Spires, Path, 942 Lambeth Circle, Durham; Wash. Univ., 1948.....	1953	1955
Jones, David P., N, Mason Farm Road, Chapel Hill; Univ. of Liverpool, 1944.....	1953	1953
Jones, J. Kempton, GP, 227 E. Franklin Street, Chapel Hill; Duke, 1946.....	1950	1950
Jones, Thomas Thweatt, GP, 604 W. Chapel Hill Street, Durham; Johns Hopkins, 1932	1934	1935
Joyner, William Stafford, GP, 227 E. Franklin St., Chapel Hill; Harvard, 1952.....	1952	1954
Kempner, Walter, I, Box 3099, Duke Hospital, Durham; Univ. of Heidelberg, 1926.....	1943	1943
Kerby, Grace P., I & D, Box 3328, Duke Hospital, Durham; Duke, 1946.....	1946	1950
Kerns, Thomas Cleveland, (Hon.), OALR, 1110 W. Main Street, Durham; Univ. of Penn., 1911.....	1911	1913
Kunkle, Edward Charles, N & I, Duke Hospital, Durham; Cornell, 1939.....	1948	1949

ROSTER OF FELLOWS

69

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Langdell, Robert D., Path, 1615 Amberst Rd., Hyattsville, Maryland; George Washington Univ., 1948	1951	1953
Lawrason, F. Douglas, Ed & I, UNC School of Medicine, Chapel Hill; Univ. of Minn., 1944	1953	1953
Leary, Deborah C., ObG, U.N.C. School of Medicine, Chapel Hill; Yale, 1936	1952	1952
Lindsay, Robert Boyd, GP, Univ. Infirmary, Chapel Hill; Jefferson, 1940	1940	1947
Littlefield, James B., S, Box 68, Univ. of Va. Hosp., Charlottesville; Univ. of Md., 1944	1950	1953
London, Arthur Hill, Jr., Pd, 306 S. Gregson Street, Durham; Univ. of Penn., 1927	1927	1930
Loring, William Ellsworth, Path, UNC Sch. of Med., Chapel Hill; Columbia Univ., 1946	1953	1954
Lowenbach, Hans, PN, Duke Hospital, Durham; Hamburg, Germany, 1929	1952	1953
Manly, James H., Jr., S, N. C. Mem. Hosp., Chapel Hill; Pennsylvania, 1946	1946	1954
Manning, Isaac Hall, Jr., I, 417 Trust Bldg., Durham; Harvard, 1935	1938	1939
Markham, Blackwell, (Hon.), S, 123 W. Main Street, Durham; Harvard, 1922	1922	1925
Martin, Ruth Campbell, Anes, Duke Hospital, Durham; Wash. Univ., 1941	1947	1948
Martin, Samuel P., I, Duke Hospital, Durham; Wash. Univ., 1941	1947	1950
Mauroner, Norman L., GP, Box 446, Hillsboro; La. State Univ., 1952	1953	1954
McBryde, Angus Murdoch, Pd, Duke Hospital, Durham; Univ. of Penn., 1928	1931	1932
McCracken, Joseph Pickett, I, 516 Trust Bldg., Durham; Duke, 1937	1938	1941
McGavran, Edward G., PH, School of Public Health, U.N.C., Chapel Hill; Harvard, 1928	1948	1948
McKee, Lewis Middleton, GP, 414 Trust Bldg., Durham; Temple, 1933	1934	1934
McPherson, Samuel D., Jr., Oph, McPherson Hospital, Durham; Johns Hopkins, 1943	1948	1948
Menefee, Elijah Eugene, Jr., I & T, Duke Hospital, Durham; Duke Univ., 1936	1940	1941
Morgan, William Gardner, Ed & GP, U.N.C. Infirmary, Chapel Hill; Univ. of Penn., 1931	1931	1937
Muller, John Crawford, I, 710A Pendleton St., Greenville, S. C.; Duke, 1948	1950	1955
Murdaugh, Herschel Victor, Hosp. Res., Box 3322, Duke Hosp., Durham; Duke, 1950	1954	1955
Murphy, Robert Jennings, Jr., Pd, P.O. Box 709, Hillsboro; Vanderbilt, 1940	1940	1942
Murray, Robert G., Oph, Memorial Hospital, Chapel Hill; Univ. of Toronto, 1941	1953	1953
Myers, Jack D., I & C, Duke Hospital, Durham; Stanford Univ., 1937	1947	1948
Nichols, Rhodes Edmond, Jr., I, 306 S. Gregson St., Durham; Univ. of Penn., 1930	1930	1932
Nicholson, William McNeal, I, Duke Hospital, Durham; Johns Hopkins, 1931	1935	1937
Odom, Guy L., NS, Duke Hospital, Durham; Tulane, 1933	1943	1944
Ordway, Nelson Kneeland, Pd, N. C. Mem. Hosp., Chapel Hill; Yale, 1938	1954	1954
Orgain, Edward Stewart, C & I, Duke Hospital, Durham; Univ. of Va., 1930	1934	1936
Owen, George Franklin, Jr., I, 212 Trust Bldg., Durham; Jefferson, 1944	1947	1949
Pace, Sherman H., GP, 1438 Gulf to Bay Blvd., Charwater, Fla.; Duke, 1947	1947	1950
Palmer, Jeffress G., I, N. C. School of Medicine, Chapel Hill; Emory Univ., 1944	1952	1952
Palumbo, Leonard, Jr., ObG, N. C. Memorial Hospital, Chapel Hill; Duke, 1944	1947	1950
Parker, Joseph B., Jr., P, 2713 Dogwood Road, Durham; Tenn. Univ., 1941	1948	1955
Parker, Roy Turnage, ObG, Box 3517, Duke Hospital, Durham; Med. Coll. of Va., 1944	1947	1950
Patterson, Carl Norris, ALR, 1110 W. Main Street, Durham; Univ. of Md., 1944	1948	1948
Patterson, Fred Geer, GP, 227 E. Franklin Street, Chapel Hill; Univ. of Penn., 1937	1937	1940
Patterson, Hubert Clifton, Ed & S, Memorial Hosp., Chapel Hill; Harvard, 1937	1947	1947
Pearse, Richard Lehmer, ObG, 604 W. Chapel Hill Street, Durham; Harvard, 1931	1938	1938
Peebles, Charles Henry, Jr., OALR, 1110 West Main St., Durham; Med. Coll. of S. C., 1951	1952	1955
Peele, Talmage L., N, Box 3811, Duke Hospital, Durham; Duke, 1934	1940	1953
Penick, George Dial, Path, Memorial Hospital, Chapel Hill; Harvard, 1946	1946	1953
Perry, David Russell, (Hon.), I, Depositors Nat. Bank Bldg., Durham; Jefferson, 1919	1919	1922
Perry, S. Paul, R, Watts Hospital, Durham; Rush Medical College, 1925	1953	1953
Persons, Elbert Lapsley, I, Duke Hospital, Durham; Harvard, 1927	1931	1931
Peschel, Ernst, I, Duke Hospital, Durham; Berlin Univ., Germany, 1930	1954	1955
Peters, Ann DeHuff, Pd, Memorial Hospital, Chapel Hill; Univ. of Wash., 1946	1953	1954
Peters, Richard M., S, U.N.C. School of Medicine, Chapel Hill; Yale, 1945	1952	1952
Peterson, Osler L., I, Miller Hall, Chapel Hill; Univ. of Minnesota, 1938	1952	1953
Pfeiffer, John B., Jr., N, Box 3508, Duke Hospital, Durham; Cornell, 1932	1949	1951
Pickrell, Kenneth L., S, Duke Hospital, Durham; Johns Hopkins, 1935	1944	1945
Podger, Kenneth A., ObG, 604 W. Chapel Hill Street, Durham; Duke, 1941	1947	1949
Powell, Albert Henry, I, 212 W. Main Street, Durham; Univ. of Ga., 1924	1925	1926
Proctor, James Thornton, P, Dept. of Psychiatry, UNC Med. Sch., Chapel Hill; Univ. of Kansas, 1946	1955	1955
Pryor, William Watkins, C, 710A Pendleton St., Greenville, S.C.; Duke, 1947	1950	1954
Raney, Richard Beverly, Or, N. C. Memorial Hospital, Chapel Hill; Harvard, 1930	1934	1935
Reeves, Robert James, R, Duke Hospital, Durham; Baylor University, 1924	1930	1930
Rice, A. Douglas, Pd, 708 Louise Circle, Durham; Duke, 1951	1954	1955
Richardson, William Perry, PH & Ed, N. C. Memorial Hospital, Chapel Hill; Med. Coll. of Va., 1928	1928	1929
Ritchie, John A., P, V. A. Hosp., Durham; Duke, 1943	1948	1955
Robbins, Jack G., D, 719 Broad St., Durham; Duke, 1948	1949	1954
Roberson, Foy, (Hon.), S, 512 Jackson Street, Durham; Jefferson, 1909	1909	1912
Roberts, Bennett Watson, Pd, 602 W. Chapel Hill Street, Durham; Univ. of Md., 1924	1924	1927
Roberts, Elizabeth Marie, GP, Bahama: Med. Coll. of S. C., 1949	1951	1951
Roberts, Louis Carroll, U, 1200 Broad Street, Durham; Duke, 1933	1935	1940
Robertson, Edwin Mason, S, Box 603, 518 Trust Bldg., Durham; Univ. of Md., 1924	1924	1929
Rodwell, Eleanor, GP, 111 Corcoran Street, Durham; Temple, 1942	1942	1944
Rogers, Gaston Wilder, PH, Box 598, Chapel Hill; Birmingham Med. Coll., 1911	1937	1941
Ross, Robert Alexander, ObG, U.N.C. Memorial Hosp., Chapel Hill; Univ. of Penn., 1922	1922	1926

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Rothstein, Leonard Milton, P, 3631 Duke Hosp., Durham; Duke, 1944.....	1954	1954
Ruffin, Julian Meade, I & GE, Duke Hospital, Durham; Univ. of Va., 1926.....	1930	1931
Rundles, R. Wayne, I, Duke Hospital, Durham; Duke, 1940.....	1946	1946
Schiebel, Herman Max., S, 1202 Broad Street, Durham; Johns Hopkins, 1933.....	1938	1940
Schlesman, Guy W., R, Watts Hospital, Durham; Duke, 1946.....	1954	1954
Schwartz, Theodore B., I, VA Hospital, Durham; Johns Hopkins, 1943.....	1950	1950
Scott, Annie V., Pd, N. C. Mem. Hosp., Chapel Hill; Woman's Med. Coll. of Penn., 1918.....	1918	1954
Sealy, Will Camp, S, Duke Hospital, Durham; Emory, 1936.....	1946	1948
Semans, James H., U, Duke Hospital, Durham; Johns Hopkins, 1936.....	1953	1954
Sessions, John T., Jr., GE & Ed, Dept. of Med., U.N.C., Chapel Hill; Emory, 1945.....	1952	1952
Shands, Harley C., P, Memorial Hospital, Chapel Hill; Tulane, 1939.....	1953	1953
Sherrill, John F., R, Watts Hospital, Durham; Bowman Gray, 1946.....	1947	1952
Shingleton, William W., S, Duke Hospital, Durham; Bowman Gray, 1943.....	1943	1951
Shuler, James Edward, (Hon.), GP, 1905 Driver Ave., Durham; Med. Coll. of Va., 1914.....	1920	1922
Sieker, Herbert Otto, I, Duke Hospital, Durham; Wash. Univ., 1948.....	1950	1955
Silver, George A., P, Duke Hospital, Durham; Duke, 1938.....	1947	1948
Singletary, William Vance, I, 306 S. Gregson Street, Durham; Duke, 1943.....	1944	1948
Skinner, Benjamin Smith, Pd, 403 Jackson Street, Durham; Wash. Univ., 1940.....	1940	1946
Smith, Albert G., Path, Duke Hospital, Durham; Wash. Univ., 1947.....	1952	1955
Smith, Annie Thompson, GP, 316 Trust Bldg., Durham; Univ. of Ill., 1923.....	1925	1926
Smith, David Tillerson, T & I, Duke Hospital, Durham; Johns Hopkins, 1922.....	1931	1931
Sorrow, John Mitchell, Jr., I, N. C. Memorial Hospital, Chapel Hill; Univ. of Penn., 1946.....	1946	1954
Sprunt, William H., R, Memorial Hospital, Chapel Hill; Harvard Univ., 1945.....	1948	1953
Stanford, Lois Brooke Foote, (Hon.), Ed, 111 Corcoran Street, Durham; Univ. of Penn., 1921.....	1923	1924
Stanford, William Raney, (Hon.), I, 111 Corcoran St., Durham; Univ. of Penn., 1919.....	1919	1923
Starke, Helen, I, Our Lady of Mary Knoll Novitiate, Valley Park, Missouri; Duke, 1942.....	1945	1951
Stead, Eugene Anson, Jr., I, Duke Hospital, Durham; Emory, 1932.....	1947	1947
Stephen, Charles Ronald, Anes, Box 3535, Duke Hospital, Durham; McGill, 1940.....	1950	1951
Stocker, Frederick W., Oph, McPherson Hospital, Durham; Univ. of Bern, Switzerland, 1919.....	1943	1943
Sugioka, Kenneth, Anes, N. C. Mem. Hosp., Chapel Hill; Wash. Univ., 1949.....	1954	1955
Suitt, Robert Burke, P & Ed, Duke Univ., Durham; St. Louis Univ. Sch. of Med., 1932.....	1933	1938
Swanton, Margaret C., Path, UNC Sch. of Med., Chapel Hill; Johns Hopkins, 1946.....	1949	1953
Sweaney, Hunter McGuire, (Hon.), S, 1200 Broad St., Durham; Univ. of Penn., 1919.....	1919	1920
Taylor, Isaac Montrose, I, Box 1165, Med. Sch. of U.N.C., Chapel Hill; Harvard, 1945.....	1952	1952
Taylor, James A., I, UNC Infirmary, Chapel Hill; Harvard, 1943.....	1949	1951
Taylor, William Jape, I, Duke Hospital, Durham; Harvard, 1947.....	1951	1955
Thomas, Colin G., Jr., S, Memorial Hospital, Chapel Hill; Univ. of Chicago, 1943.....	1952	1952
Thomas, Walter Lee, ObG, Box 3705, Duke Hospital, Durham; Univ. of Va., 1931.....	1937	1938
Turner, Larry, OALR, 1110 W. Main Street, Durham; Duke, 1939.....	1941	1947
Turner, Violet Horner, ObG, Duke Hospital, Durham; Univ. of Chicago, 1940.....	1944	1945
Tyler, Earl Runyon, D, P.O. Box 427, 1200 Broad Street, Durham; Jefferson, 1923.....	1923	1927
†Tyson, John Joyner, S, V. A. Hospital, Durham; Med. Coll. of Va., 1928.....	1928	1955
Vaughan, Walter Weddle, R, 731 Broad Street, Durham; Jefferson, 1933.....	1933	1938
Watkins, Ralph M., I, 121 Infirmary, UNC, Chapel Hill; Syracuse Univ., 1920.....	1953	1954
Watkins, William Merritt, (Hon.), GP, 503 Trust Bldg., Durham; Jefferson, 1923.....	1923	1925
Webb, George A., Pd, 306 S. Gregson Street, Durham; Duke, 1939.....	1939	1947
Webb, Bailey, Pd, 809 W. Chapel Hill Street, Durham; Duke, 1946.....	1949	1949
Wells, Warner L., S, U.N.C. School of Medicine, Chapel Hill; Duke, 1938.....	1941	1946
Welt, Louis Gordon, I & Ed, U.N.C. School of Medicine, Chapel Hill; Yale, 1938.....	1952	1952
White, Kerr Lachlan, I, Memorial Hospital, Chapel Hill; McGill, 1949.....	1953	1953
Wilkins, Robert Bruce, (Hon.), OALR, 123 West Main Street, Durham; N. C. Med. Coll., 1913.....	1913	1917
Willis, Henry Stuart, I & T, N. C. Sanatorium, Chapel Hill; Johns Hopkins, 1919.....	1947	1947
Wilson, James Stephenson, S, 1200 Broad St., Durham; Duke, 1937.....	1947	1947
Wilson, William P., P, Veterans Admn. Hosp., Durham; Duke, 1947.....	1950	1953
Winborne, Roger M., Jr., I, Memorial Hospital, Chapel Hill; Univ. of Penn., 1948.....	1948	1954
Winter, Frank Counsel, Oph, 5645 Royal Oak Rd., Encino, Calif.; Stanford Univ., 1946.....	1953	1953
Womack, Nathan A., S, U.N.C. Medical School, Chapel Hill; Wash. Univ., 1924.....	1924	1952
Wood, Ernest H., R, N. C. Memorial Hospital, Chapel Hill; Harvard, 1939.....	1952	1952
Woodhall, Maurice Barnes, NS, Duke Hospital, Durham; Johns Hopkins, 1930.....	1937	1937
Woods, James Watson, Jr., I & C, UNC Sch. of Medicine, Chapel Hill; Vanderbilt, 1943.....	1948	1948
Wright, John Joseph, PH & Ed, School of Public Health of U.N.C., Chapel Hill; Vanderbilt, 1935.....	1940	1942

EDGEcombe-NASH COUNTIES SOCIETY²⁴

OFFICERS—President: Pearson, H. O., (Biog. below), Pinetops		
Secretary: Brantley, J. C., Jr., (Biog. below), Rocky Mount.....		
Anderson, Richard Speight, S, Route 1, Whitakers; Univ. of Md., 1924.....	1924	1932
Bailey, Clarence Whitfield, OALR, 147 N. E. Main St., Rocky Mount; Jefferson, 1925.....	1925	1930
Bass, Spencer Pippin, (Hon.), GP, 119 W. St. James Street, Tarboro; Univ. of Va., 1906.....	1907	1909
Battle, Margaret White, ObG, 521 Peachtree Street, Rocky Mount; Univ. of Mich., 1933.....	1936	1937

†Deceased

ROSTER OF FELLOWS

71

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Battle, Newsom Pittman, S, 404 Falls Road, Rocky Mount; Univ. of Penn., 1926.....	1930	1931
Bell, Orville Earl, GP, 224 Rose Street, Rocky Mount; Okla. Univ., 1936.....	1937	1938
Boice, Edmund Simpson, (Hon.), S, Park View Hosp., Rocky Mount; Univ. of Penn., 1909.....	1914	1915
Brantley, Julian Chisholm, (Hon.), GP, P.O. Box 206, Spring Hope; Jefferson, 1916.....	1916	1922
Brantley, Julian Chisholm, Jr., ObG, 410 Peachtree St., Rocky Mount; Jefferson, 1943.....	1944	1948
Brock, Julian Stanley, I, 144 Coast Line Street, Rocky Mount; Duke, 1950.....	1952	1953
Carson, Jack Oliver, GP, Box 387, Spring Hope; Univ. of Md., 1952.....	1952	1954
Chamblée, John Sigma, PH, Nash County Health Dept., Nashville; Emory, 1938.....	1938	1942
Chambliss, John Randolph, I, 404 Falls Road, Rocky Mount; Harvard, 1944.....	1944	1950
Crumpler, James Fulton, Pd, 414 Peachtree Street, Rocky Mount; N. Y. Univ., 1930.....	1930	1935
Cutchin, Joseph Henry, (Hon.), GP, Box 185, Whitakers; Univ. Coll. of Med., Richmond, 1911.....	1911	1915
Daughtridge, Arthur Lee, (Hon.), R, Box 111, Rocky Mount; Univ. of Md., 1924.....	1924	1924
Denton, Aulsey Lee, (Hon.), GP, Box 486, Castalia; Med. Coll. of Va., 1918.....	1921	1923
Fleming, Major Ivy, (Hon.), R, (Retired), 404 Falls Rd., Rocky Mount; Jefferson, 1904.....	1906	1919
Frierson, John Hugh, Jr., R, Park View Hospital, Rocky Mount; Med. Coll. of the State of S. C., 1944.....	1953	1953
Frohbose, William J., U, Parkview Hospital, Rocky Mount; Med. Coll. of Va., 1938.....	1953	1953
Golds, Ben. M., Jr., ObG, 410 Peachtree Street, Rocky Mount; Univ. of Md., 1947.....	1947	1953
Grant, Henry Boone, Pd, 416 Hickory Street, Rocky Mount; Duke, 1941.....	1945	1948
Green, William Wills, (Hon.), S, Edgecombe Gen. Hosp., Tarboro; Univ. of N. C., 1908.....	1908	1910
Hedgepeth, Albert William, GP, 6008 Woodside Drive, Jacksonville 10, Florida; Bowman Gray, 1947.....	1948	1949
High, Larry Allison, GP, Boddie Street, Nashville; Med. Coll. of Va., 1945.....	1945	1949
Horne, Stephen Francis, D, 122 Hammond Street, Rocky Mount; Duke, 1942.....	1943	1949
Hussey, Howard S., Jr., GP, 300 St. Andrews Street, Tarboro; Jefferson, 1942.....	1942	1943
Jones, William Samuel, GP, Nashville; Med. Coll. of Va., 1927.....	1927	1927
Justa, Samuel Harry, GP, 513 Sunset Ave., Rocky Mount; Med. Coll. of Va., 1933.....	1934	1934
Knowles, Daniel Lamont, (Hon.), GP, 135 S. Main St., Rocky Mt.; Univ. of Penn., 1918.....	1918	1920
Kornegay, Robert Dumais, S, 144 Coast Line Street, Rocky Mount; Duke, 1939.....	1941	1943
Lane, John Loftin, (Hon.), OALR, 203 Tarboro St., Rocky Mt.; N. C. Med. Coll., 1906.....	1906	1906
McDowell, William Kitchin, OALR, 300 St. Patrick Street, Tarboro; Jefferson, 1931.....	1931	1934
Noell, Robert Holman, (Hon.), Ind, 1320 S. Church St., Rocky Mt.; Univ. of Md., 1916.....	1916	1920
Pearson, Hugh Oliver, GP, Box 26, Pinetops; Med. Coll. of Va., 1926.....	1927	1928
Perry, Ernest Monroe, (Hon.), Retired, GP, 125 Sunset Avenue, Rocky Mount; Coll. of P. & S., Baltimore, 1907.....	1907	1913
Raby, James Grover, (Hon.), GP, 300 St. Patrick Street, Tarboro; Univ. Coll. of Medicine, Richmond, 1911.....	1911	1913
Roberson, Edward Leon, S, 305 St. Andrews Street, Tarboro; Univ. of Md., 1934.....	1934	1937
Robertson, Leon W., GP, 224 Rose Street, Rocky Mount; Bowman Gray, 1945.....	1945	1947
Rose, Ira Woodall, Jr., S, 205 Rose Street, Rocky Mount; Washington Univ., 1943.....	1946	1951
Seigman, Edwin Lincoln, R, U.S. Naval Hospital, St. Albans 25, L. Island; Univ. of Md., 1941.....	1952	1953
Sheridan, Robert John, Pd, 300 St. Patrick St., Tarboro; Duke Univ., 1948.....	1953	1953
Smith, Claiborne Thweat, (Hon.), I, 404 Falls Rd., Rocky Mount; Univ. of Penn., 1918.....	1918	1920
Smith, John Goodrich, I, 404 Falls Rd., Rocky Mount; Duke, 1934.....	1937	1938
Speight, James Ambler, (Hon.), GP, 827 Hillsboro St., Rocky Mount; Univ. of La., 1914.....	1915	1916
Spence, Julian, GP, Macclesfield; Bowman Gray, 1952.....	1952	1955
Stone, Marvin Lee, GP, Rocky Mount; Univ. of Penn., 1924.....	1928	1928
Thorn, Adam Tredwell, (Hon.), ObG, 410 Peachtree Street, Rocky Mount; Univ. of Penn., 1921.....	1921	1923
Thorp, Lewis Summer, I, Park View Hospital, Rocky Mount; Univ. of Penn., 1952.....	1952	1953
Vann, Junius Richardson, (Hon.), GP, P.O. Box 86, Spring Hope; Jefferson, 1917.....	1917	1920
Walker, Robert Jeffreys, Jr., PH, 1616 West Thomas St., Rocky Mount; Med. Coll. of Va., 1932.....	1934	1935
Wall, William Stanley, Ob, 132 Coast Line St., Rocky Mount; Univ. of Penn., 1933.....	1933	1936
Way, Samuel Eason, S, 224 Rose Street, Rocky Mount; Univ. of Md., 1933.....	1933	1938
Weeks, Kenneth Durham, I, 1605 West Thomas Street, Rocky Mount; Duke, 1939.....	1940	1946
Whaley, John Lambdin, I, 300 St. Patrick St., Tarboro; Med. Coll. of Va., 1948.....	1953	1953
Whitaker, James Allen, U, 144 Coast Line Street, Rocky Mount; Temple, 1933.....	1934	1935
Whitley, Robert Macon, Jr., I, 144 Coast Line Street, Rocky Mount; Duke, 1940.....	1940	1943
Willis, Byrd Charles, (Hon.), S, (Retired), Orange, Va.; Med. Coll. of Va., 1909.....	1916	1917

FORSYTH COUNTY SOCIETY²⁵

OFFICERS—President: McMillan, Robert L., (Biog. below), Winston-Salem		
Secretary: Wilsey, John D., (Biog. below), Winston-Salem		
Adams, Carlton Noble, ObG, 428 Nissen Bldg., Winston-Salem; Duke, 1932.....	1936	1937
Adams, H. Stewart, R, City Memorial Hospital, Winston-Salem; Western Reserve, Univ. Sch. of Medicine, 1942.....	1950	1950
Alexander, Eben, Jr., NS, Bowman Gray Sch. of Med., Winston-Salem; Harvard, 1939.....	1948	1948
Alsop, William B., ALR, 204 O'Hanlon Bldg., Winston-Salem; Univ. of Ga., 1935.....	1947	1949
Anderson, Katherine H., Pd, 138 N. Hawthorne Road, Winston-Salem; Cornell, 1940.....	1943	1944
Andrew, Lacy Allen, Jr., U, 630 Reynolds Bldg., Winston-Salem; Duke, 1932.....	1932	1936
Antonakos, Theodore, GP, Danbury; Univ. of Ga., 1935.....	1936	1946

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Ausband, John Rufus, ALR Bowman Gray School of Medicine, Winston-Salem; Bowman Gray, 1943	1943	1948
Bahnon, Edward Reid, I, 202 Reynolds Bldg., Winston-Salem; Univ. of Penn., 1942	1942	1948
Benbow, Edgar Vernon, S, 631 Nissen Bldg., Winston-Salem; Jefferson, 1925	1925	1928
Benbow, John Thomas, (Hon.), GP, East Bend; N. C. Med. Coll., 1910	1910	1920
Bender, John Robert, GP, 820 Nissen Bldg., Winston-Salem; Med. Coll. of Va., 1935	1935	1939
Bittinger, Isabel, Or, 118 S. Cherry Street, Winston-Salem; Johns Hopkins, 1936	1939	1948
Blount, Frederick A., Pd, 4th Street at Spring, Winston-Salem; Univ. of Penn., 1943	1944	1949
Bond, Vernard F., Jr., I, 710 Nissen Bldg., Winston-Salem; Johns Hopkins, 1945	1948	1951
Boyce, William H., U, Bowman Gray, Winston-Salem; Vanderbilt, 1944	1952	1952
Bradford, George Edwin, ALR, 307 Nissen Bldg., Winston-Salem; Univ. of Tenn., 1933	1935	1936
Bradshaw, Howard Holt, S, Bowman Gray Sch. of Med., Winston-Salem; Jefferson, 1927	1927	1942
Brooks, Ernest Bruce, I, 514 Reynolds Bldg., Winston-Salem; Duke, 1933	1935	1936
Brown, Gerald J., GP, Westfield; Long Island Coll. of Medicine, 1948	1948	1952
Bunn, Richard Wilmot, Ind, R. J. Reynolds Tobacco Co., Winston-Salem; Temple, 1935	1936	1937
Burt, Richard L., ObG, Bowman Gray Sch. of Med., Winston-Salem; Harvard, 1946	1951	1953
Butler, Leroy Jefferson, (Hon.), Pd, 608 Summit St., Winston-Salem; Med. Coll. of Va., 1915	1920	1921
Butler, Radford N., I, O'Hanlon Bldg., Winston-Salem; Bowman Gray, 1950	1950	1953
Byerly, Frederick Lee, T, V.A.R.O., 12th Floor, Nissen Bldg., Winston-Salem; Jefferson, 1939	1939	1943
Carlton, Romulus Lee, (Hon.), PH, Retired, 2211, Elizabeth Ave., Winston-Salem; Univ. of Md., 1906	1906	1906
Carpenter, Coy Cornelius, Path, Baptist Hosp., Winston-Salem; Syracuse Univ., 1924	1924	1927
Casstevens, John Claude, Hosp Ad & S, 514 Stratford Road, Winston-Salem; Med. Coll. of Va., 1926	1926	1927
Cayer, David, GE, 2718 Robin Hood Road, Winston-Salem; Duke, 1938	1944	1944
Combs, Fielding, OALR, 522 Nissen Bldg., Winston-Salem; Med. Coll. of Va., 1923	1931	1932
Conrad, Elizabeth, Pd, 210 Reynolds Bldg., Winston-Salem; Johns Hopkins, 1943	1946	1946
Cooke, Grady Carlyle, (Hon.), D, R.F.D. #1, Morehead City; Univ. of Md., 1919	1919	1920
Couch, Vanderbilt Franklin, (Hon.), OALR, (Retired), O'Hanlon Bldg., Winston-Salem; Columbia Univ., 1911	1911	1919
Coulter, J. C., T, Forsyth County Sanatorium, Winston-Salem; Univ. of Va., 1907	1952	1953
Cox, William Foscue, I, 1007 Reynolds Bldg., Winston-Salem; Med. Coll. of Va., 1942	1947	1947
Craig, Sylvester Douglas, (Hon.), I, Box 1950, 8 West 3rd St., Winston-Salem; Tulane, 1908	1911	1912
Crutchfield, Andrew J., I, 610 W. Fifth Street, Winston-Salem; Univ. of Va., 1942	1942	1950
Davis, Courtland, NS, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Va., 1944	1944	1952
Davis, John Preston, I, 310 W. Fourth Street, Winston-Salem; Univ. of Penn., 1934	1937	1938
Davis, Wayne, U, 626 Reynolds Bldg., Winston-Salem; Duke, 1949	1951	1954
Davis, William Hersey, Jr., Pd, 720 W. Fifth St., Winston-Salem; Duke, 1944	1944	1947
Donnelly, James Ford, ObG, State Bd. of Health, Raleigh; Univ. of Chicago, 1939	1941	1946
Dorsett, Fletcher I., GP, 2000 S. Main St., Winston-Salem; Med. Coll. of Va., 1941	1943	1950
Elesha, William, S, 857 W. Fifth St., Winston-Salem; Amer. Univ., Beirut, 1945	1953	1953
Fearrington, James Cornelius Pass, I, 642 Holly Ave., Winston-Salem; Rush, 1930	1933	1934
Felts, John H., Jr., GP, Bowman Gray Sch. of Med., Winston-Salem; Med. Coll. of S. C., 1949	1955	1955
Forsyth, H. Francis, Or, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Mich., 1940	1941	1946
Foster, John W., I, Veterans Administration, Winston-Salem; Rush, 1930	1932	1951
Foushee, J. Henry Smith, Jr., Path & CP, Baptist Hospital, Winston-Salem; Jefferson, 1947	1947	1955
Fowler, Henry Jackson, GP, Box 403, Walnut Cove; Bowman Gray, 1946	1947	1948
Fritz, Olin Grady, GP, Box 109, Walkertown; Med. Coll. of Va., 1931	1932	1940
Garrett, John B., GP, Walkertown; Bowman Gray, 1951	1951	1952
Garvey, Fred Kesler, U, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Cinn., 1925	1925	1932
Glod, A. P., S, 405 N. Spring St., Winston-Salem; Bowman Gray, 1943	1944	1954
Gobble, Fleetus Lee, Jr., ObG, 612 W. Fifth St., Winston-Salem; Bowman Gray, 1944	1944	1950
Goswick, Harry Wilson, Jr., S, 416 Reynolds Bldg., Winston-Salem; Univ. of Tenn., 1931	1934	1935
Green, Harold David, I & Phy, Bowman Gray Sch. of Med., Winston-Salem; Western Reserve, 1931	1945	1945
Griffith, Mary Irene, ObG, 116 Lockland Avenue, Winston-Salem; Univ. of Tenn., 1942	1942	1946
Groat, Richard A., GP, 201½ Eden Terrace, Winston-Salem; Bowman Gray, 1952	1952	1955
Hanes, Gideon I., Jr., ObG, O'Hanlon Bldg., Winston-Salem; Bowman Gray, 1951	1951	1953
Harding, Samuel Asberry, (Hon.), GP, 21 Court Square, Mocksville; N. C. Med. Coll., 1910	1910	1913
Harrill, James Albert, ALR, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Penn., 1935	1935	1939
Harrington, Lee, Jr., I, Reynolds Tobacco Company, Winston-Salem; Temple, 1944	1949	1952
Hart, Oliver James, U, 414 Reynolds Bldg., Winston-Salem; Med. Coll. of S. C., 1925	1930	1932
Hedrick, Richard E., GP, 857 W. Fifth St., Winston-Salem; Med. Coll. of S. C., 1943	1943	1947

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Helsabeck, Belmont Augustus, Oph, Reynolds Bldg., Winston-Salem; Med. Coll. of Va., 1931.....	1931	1936
Helsabeck, Chester Joseph, (Hon.), GP, Box 416, Walnut Cove; Univ. of Md., 1919.....	1919	1922
Helsabeck, Rupert Sylvester, GP, King; N. C. Med. Coll., 1913.....	1913	1936
Henley, Ruth Dixon, ObG, 718 Nissen Bldg., Winston-Salem; Woman's Med. Coll. of Penn., 1935	1937	1938
Hightower, Felda, S, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Penn., 1933	1933	1936
Hinman, Alanson, P, Bowman Gray Sch. of Med., Winston-Salem; Johns Hopkins, 1946	1947	1952
Hollandsworth, L. C., GP, Route 1, Winston-Salem; Bowman Gray, 1951.....	1951	1953
Holmes, George Washington, Or, 620 Nissen Bldg., Winston-Salem; Med. Coll. of Va., 1931.....	1931	1933
Holt, Lawrence Byerly, Oph, 209 Reynolds Bldg., Winston-Salem; Bowman Gray, 1945	1945	1948
Howell, Charles M., Jr., D, 405 N. Spring St., Winston-Salem; Univ. of Penn., 1937.....	1937	1946
Howell, Julius A., Res, 405 N. Spring St., Winston-Salem; Univ. of Penn., 1943.....	1943	1952
Hurdle, Samuel Walker, (Hon.), Ins, Retired, 2571 West First Street, Winston-Salem; Jefferson, 1914	1914	1915
Hutaff, Lucille, I, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Rochester, 1940.....	1940	1945
Izlar, Henry LeRoy, (Hon.), GP, 942 W. Fourth St., Winston-Salem; Med. Coll. of S. C., 1915.....	1916	1917
James, George W., D, 205 S. Hawthorne Rd., Winston-Salem; Univ. of Tenn., 1940.....	1940	1949
Jeffreys, Everett O., NS, 705 O'Hanlon Bldg., Winston-Salem; Washington Univ., 1934	1938	1945
Johnson, Gaston Frank, R, 804 O'Hanlon Bldg., Winston-Salem; Jefferson, 1934.....	1934	1938
Johnson, Paul William, ObG, 824 Nissen Bldg., Winston-Salem; Univ. of Louisville, 1930.....	1932	1933
Johnson, Wingate Memory, (Hon.), I, Bowman Gray Sch. of Med., Winston-Salem; Jefferson, 1908	1908	1910
Johnston, Frank R., S, Bowman Gray Sch. of Med., Winston-Salem; Duke, 1942.....	1950	1950
Jones, Beverly Nicholas, (Hon.), OALR, 310 O'Hanlon Bldg., Winston-Salem; Med. Coll. of Va., 1915.....	1915	1921
Jones, Beverly Nicholas, Jr., I, 504 O'Hanlon Bldg., Winston-Salem; Duke, 1945.....	1945	1945
Jones, Joseph Reid, Jr., GP, Box 298, King; Bowman Gray, 1951.....	1951	1952
Kapp, Constantine Hege, T, Forsyth County Sanatorium, Winston-Salem; McGill Univ., 1938	1938	1940
Keiger, Oscar R., (Hon.), GP, 8 W. Third Street, Winston-Salem; Univ. Coll. of Med., Richmond, 1911.....	1911	1915
Kelsey, Weston Maynard, Pd, Bowman Gray Sch. of Med., Winston-Salem; Johns Hopkins, 1936	1936	1946
Kirby, William Leslie, D, 310 W. Fourth St., Winston-Salem; Vanderbilt, 1925.....	1926	1930
Lambeth, W. A., Jr., I, Nissen Building, Winston-Salem; Duke, 1946.....	1950	1953
Lassiter, Vernon Clark, S & Ind, 626 Reynolds Bldg., Winston-Salem; Emory, 1925.....	1928	1929
Lide, Thomas N., Path, City Memorial Hospital, Winston-Salem; Duke, 1938.....	1947	1947
Littlejohn, T. W., Ob, 509 O'Hanlon Bldg., Winston-Salem; Univ. of Tenn., 1947.....	1948	1949
Lock, Frank Ray, ObG, Bowman Gray Sch. of Med., Winston-Salem; Tulane, 1935.....	1935	1941
Long, Vann McKee, (Hon.), U, 1020 W. End Blvd., Winston-Salem; N. C. Med. Coll., 1906.....	1906	1908
Marr, James Tilden, R, 726 Nissen Bldg., Winston-Salem; Univ. of Kansas, 1937.....	1937	1946
Marshall, James Flournoy, S, 310 W. Fourth St., Winston-Salem; Univ. of Penn., 1931	1931	1935
Martin, Benjamin Franklin, I, 418 Nissen Bldg., Winston-Salem; Jefferson, 1936.....	1936	1940
Martin, James F., R, Bowman Gray Sch. of Med., Winston-Salem; Western Reserve Univ., 1942	1950	1951
Martin, Lester Poindexter, (Hon.), OALR, Box 512, Mocksville; Jefferson, 1920.....	1920	1921
Masland, Richard L., PN, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Penn., 1935.....	1937	1947
Mauzy, Charles Hampton, Jr., ObG, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Va., 1933.....	1938	1939
May, William Joseph, GP, 334 Nissen Bldg., Winston-Salem; Bowman Gray, 1944.....	1944	1949
McCall, William, Jr., I, 310 West Fourth St., Winston-Salem; Duke, 1949.....	1952	1955
McDowell, Harold Clyde, Or, 1814 Nissen Bldg., Winston-Salem; Jefferson, 1931.....	1931	1936
McMillan, Robert Lindsay, C, Bowman Gray Sch. of Med., Winston-Salem; Duke, 1933	1936	1938
Meads, Manson, I, Bowman Gray Sch. of Med., Winston-Salem; Temple, 1943.....	1947	1947
Means, Robert L., S, 712 O'Hanlon Bldg., Winston-Salem; Wake Forest, 1945.....	1948	1955
Medlin, Charles T., GP, Rural Hall; Bowman Gray, 1952.....	1952	1953
Menzies, Henry Harding, ObG, 101 S. Cherry Street, Winston-Salem; Med. Coll. of Va., 1923.....	1923	1926
Miller, Emery C., Jr., I, Bowman Gray Sch. of Med., Winston-Salem; Johns Hopkins, 1949.....	1953	1955
Moore, Robert Alexander, (Hon.), Or, Bowman Gray Sch. of Med., Winston-Salem; N. C. Med. Coll., 1911.....	1911	1917
Morehead, Robert Page, Path & Ed, Bowman Gray Sch. of Med., Winston-Salem; Jefferson, 1936	1936	1938
Morris, Donald S., Path & CP, City Memorial Hospital, Winston-Salem; Med. Coll. of Va., 1941.....	1951	1952
Munt, Herbert Frederick, (Hon.), Or, 814 Carolina Ave., Winston-Salem; Med. Coll. of Va., 1911.....	1914	1915
Myers, Richard Thomas, S, Bowman Gray Sch. of Med., Winston-Salem;		

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Univ. of Penn., 1943.....	1943	1950
Nanzetta, Leonard, Anes, City Mem. Hosp., Winston-Salem; Univ. of Mich., 1942.....	1946	1946
Netsky, Martin G., NP, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Penn., 1943.....	1943	1955
Nichols, Robert J., R, City Mem. Hosp., Winston-Salem; Indiana Univ., 1945.....	1945	1953
Nifong, Frank M., GP, Clemmons; Jefferson, 1943.....	1943	1948
Norfleet, Charles Millner, Jr., U, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Penn., 1937.....	1937	1941
Ogburn, Lundie Calvin, G, 105 W. Fourth St., Winston-Salem; Jefferson, 1928.....	1928	1936
O'Neal, Ruth, Pd, 215 Reynolds Bldg., Winston-Salem; Med. Coll. of Va., 1943.....	1945	1948
Page, William Gordon, S, 743 Austin Lane, Winston-Salem; Jefferson, 1939.....	1946	1946
Parris, A. E., GP, 4014 N. Cherry St. Ext., Winston-Salem; Wake Forest, 1953.....	1953	1954
Pegg, Fred Grant, PH, P.O. Box 2975, Winston-Salem; Med. Coll. of Va., 1934.....	1934	1936
Perry, D. Russell, Jr., Pd, S. Hawthorne Road, Winston-Salem; Bowman Gray, 1946.....	1947	1953
Perryman, Olin C., Jr., GP, 105 E. Clemmonsville Rd., Winston-Salem; Duke, 1941.....	1947	1947
Pfohl, Samuel Frederick, (Hon.), I, 403 S. Main St., Winston-Salem; Univ. of Penn., 1894.....	1898	1898
Pool, Bennette Baucom, (Hon.), A, 414 Nissen Bldg., Winston-Salem; Jefferson, 1923.....	1923	1925
Pool, Charles Glenn, Pd, 636 Nissen Bldg., Winston-Salem; Tulane, 1924.....	1924	1927
Powers, Earl J., Or, Nissen Bldg., Winston-Salem; Univ. of Cinn., 1932.....	1932	1952
Prichard, Robert W., Path, Bowman Gray Sch. of Med., Winston-Salem; George Washington Univ., 1947.....	1951	1951
Proctor, Richard Culpepper, P, Graylyn, Winston-Salem; Bowman Gray, 1945.....	1947	1948
Pulliam, B. E., GP, Robin Hood Rd., Winston-Salem; Jefferson, 1928.....	1928	1931
Rabil, William E., S, 205 S. Hawthorne Rd., Winston-Salem; Univ. of Va., 1946.....	1946	1952
Randolph, Angus C., P, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Va., 1940.....	1948	1948
Reid, Charles Hamilton, Jr., I, 824 Nissen Bldg., Winston-Salem; Duke, 1942.....	1945	1945
Reinhart, John B., Pd, Western Psychiatric Institute & Clinics, 3811 O'Hara Street, Pittsburgh 13, Penn.; Bowman Gray, 1943.....	1943	1950
Reynolds, Joyce, GP, 109 Clifton St., Box 797, Kernersville; Bowman Gray, 1952.....	1952	1955
Richards, Charles E., I, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Nebr., 1940.....	1953	1954
Roberts, R. Winston, Oph, N. C. Baptist Hospital, Winston-Salem; Duke, 1940.....	1947	1948
Rousseau, James Parks, (Hon.), R, 1014 West Fifth St., Winston-Salem; Univ. of Md., 1918.....	1920	1920
Ruland, M. B., GP, 857 W. 5th St., Winston-Salem; Bowman Gray, 1952.....	1953	1955
Sawyer, C. Glenn, I, Bowman Gray Sch. of Med., Winston-Salem; Bowman Gray, 1944.....	1944	1950
Schallert, Paul Otto, (Hon.), I, Retired, Box 262, Altamonte Springs, Fla.; Univ. of Ill., 1904.....	1911	1912
Shaffner, Louis deS., S, Bowman Gray Sch. of Med., Winston-Salem; Harvard, 1941.....	1947	1951
Simpson, Thomas W., I, 601 Reynolds Bldg., Winston-Salem; Johns Hopkins, 1943.....	1950	1950
Slate, John Samuel, (Hon.), GP, 1215 W. Fourth St., Winston-Salem; Univ. Coll. of Med., Richmond, 1900.....	1899	1904
Speas, Dallas C., (Hon.), GP, 2598 Reynolda Rd., Winston-Salem; Univ. of Md., 1911.....	1913	1924
Speas, William Paul, (Hon.), Oph, 324 Reynolds Bldg., Winston-Salem; Univ. Coll. of Med., Richmond, 1911.....	1911	1912
Speas, William Paul, Jr., GP, 210 O'Hanlon Bldg., Winston-Salem; Univ. of Penn., 1939.....	1939	1946
Spicer, Richard Williams, (Hon.), Ob, 405 N. Spring St., Winston-Salem; N. C. Med. Coll., 1910.....	1910	1916
Sprunt, William Hutchinson, Jr., (Hon.), S, 1931 Va. Rd., Winston-Salem; Univ. of Penn., 1918.....	1918	1925
Starling, Howard Montfort, S, 505 Reynolds Bldg., Winston-Salem; Med. Coll. of Va., 1931.....	1931	1937
Stimpson, Robert Tula, GP, 827 Nissen Bldg., Winston-Salem; Univ. of Penn., 1927.....	1927	1930
Street, Claudius Augustus, (Hon.), Pd, 405 N. Spring St., Winston-Salem; Harvard, 1918.....	1918	1925
Strobos, Robert J., Jr., NP, Bowman Gray Sch. of Med., Winston-Salem; Univ. of Amsterdam, Holland, 1945.....	1954	1955
Sweel, Alexander, P, 1950 W. First Street, Winston-Salem; Bowman Gray, 1946.....	1946	1952
Thomson, Lloyd J., P, Bowman Gray Sch. of Med., Winston-Salem; Wash. Univ., St. Louis, 1919.....	1919	1947
Thompson, Walter Lee, Jr., GP, 310 West Fourth St., Winston-Salem; Bowman Gray, 1953.....	1953	1955
Tuttle, Reuben Gray, (Hon.), GP, 201 O'Hanlon Bldg., Winston-Salem; N. C. Med. Coll., 1909.....	1909	1913
Tyner, Kenneth V., S, 336 Nissen Bldg., Winston-Salem; Temple Univ., 1943.....	1943	1950
Valk, Arthur DeTalma, (Hon.), S, Bowman Gray Sch. of Med., Winston-Salem; Johns Hopkins, 1910.....	1913	1914
Valk, Henry L., I, Bowman Gray Sch. of Med., Winston-Salem; Duke, 1941.....	1943	1948
Vann, Robert L., Pd, Bowman Gray Sch. of Med., Winston-Salem; Bowman Gray, 1945.....	1945	1948
Walker, William Thomas, GP, Pinnix Bldg., Kernersville; Med. Coll. of Va., 1949.....	1950	1950
Wall, Roscoe LeGrand, (Hon.), Anes, Bowman Gray Sch. of Med., Winston-Salem; Jefferson, 1912.....	1912	1915
Wall, Roscoe L., Jr., ObG, 405 N. Spring St., Winston-Salem; Jefferson, 1940.....	1940	1950
Ware, Norma, Pd, Winston-Salem; Duke, 1946.....	1949	1950
Weaver, Richard G., Oph, Bowman Gray, Winston-Salem; Wash. Univ., St. Louis, 1947.....	1947	1954
Welfare, Charles Randall, I, 424 Nissen Bldg., Winston-Salem; Univ. of Penn., 1940.....	1940	1947

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Whitaker, Richard Harper, GP, Box 1136, Cherry Street, Kernersville; Univ. of Penn., 1934.....	1934	1939
White, Edward R., I, 712 O'Hanlon Bldg., Winston-Salem; Univ. of Wisconsin, 1951.....	1952	1953
Whitner, Donald L., ObG, 01878500 5017th ASU U. S. Army Hosp., Ft. Leonard Wood, Mo.; Johns Hopkins, 1946.....	1950	1951
Whittington, James Benbow, (Hon.), Hosp Ad, P.O. Box 2954, Winston-Salem; N. C. Med. Coll., 1911.....	1911	1911
Wiggins, John Carroll, Jr., I, 415 N. Spring St., Winston-Salem; Harvard, 1941.....	1947	1948
Williams, Kenan, Pd, 207 S. Hawthorne Rd., Winston-Salem; Jefferson, 1944.....	1944	1951
Williams, Samuel Clay, I, 1503 Reynolds Bldg., Winston-Salem; Univ. of Penn., 1945.....	1946	1951
Wilsey, John Derrick, Oph, 310 W. Fourth St., Winston-Salem; Johns Hopkins, 1941.....	1944	1944
Wolfe, Ralph Verlon, S, 119 Marshall Street, S. W., Winston-Salem; Univ. of Indiana, 1937.....	1940	1941
Wright, Orpheus Evans, GP, 126 E. Sprague St., Winston-Salem; Emory Univ., 1924.....	1924	1928
Wyatt, Wortham, (Hon.), D, 403 Reynolds Bldg., Winston-Salem; Univ. of Penn., 1913.....	1913	1916
Wylie, William DeKalb, I, 702 Wachovia Bank Bldg., Winston-Salem; Univ. of Va., 1924.....	1926	1928
Young, Cabell, Or, Baptist Hospital, Winston-Salem; Duke, 1943.....	1951	1952
Yount, Ernest Harshaw, Jr., I, Bowman Gray Sch. of Med., Winston-Salem; Vanderbilt, 1943.....	1948	1948

FRANKLIN COUNTY SOCIETY²⁶

OFFICERS—President: Stewart, Marcus G., (Biog. below), Louisburg Secretary: Patterson, B. L., (Biog. below), Louisburg		
Burt, Samuel Perry, (Hon.), GP, P.O. Box 238, Louisburg; Coll. of P. & S., Baltimore, 1896.....	1896	1904
Cheves, William Grey, Hosp Ad & I, Franklinton; Jefferson, 1925.....	1925	1933
Cole, Walter F., GP, Box 6, Bunn; Univ. of Va., 1934.....	1939	1952
Holton, Alfred J., PH, Franklin Co. Health Center, Louisburg; Univ. of Penn., 1933.....	1940	1942
Lloyd, John T., S, Franklin Memorial Hospital, Louisburg; Temple, 1941.....	1951	1952
Nowell, James S., GP, Franklinton; Temple, 1943.....	1943	1947
Patterson, Bernard L., GP, Perry Bldg., Louisburg; Med. Coll. of Va., 1952.....	1953	1955
Stallings, Durwood, Jr., PH, Zebulon; Bowman Gray, 1946.....	1947	1950
Wheless, James Block, GP, South Market St., Louisburg; Univ. of Md., 1935.....	1935	1938
Wheless, Thomas O., GP, Market Street, Louisburg; Bowman Gray, 1943.....	1943	1947

GASTON COUNTY SOCIETY²⁷

OFFICERS—President: McDowell, Roy H., (Biog. below), Belmont Secretary: Caldwell, Jesse, Jr., (Biog. below), Gastonia		
Agner, Marshal Edward, GP, 107 S. Oak Street, Cherryville; Duke, 1952.....	1954	1954
Anders, McTyeire Gallant, (Hon.), GP, P.O. Box 1152, Gastonia; Med. Coll. of Md., 1901.....	1902	1902
Anthony, William Augusta, C, 155 S. York St., Gastonia; Med. Coll. of Va., 1929.....	1929	1932
Belk, George W., (Hon.), GP, 403 W. Sixth Street, Gastonia; Atlanta Sch. of Med., 1913.....	1918	1924
Blair, J. Samuel, Ob, 210 S. York Street, Gastonia; Med. Coll. of S. C., 1937.....	1938	1940
Bond, John P., S, 155 S. York Street, Gastonia; Univ. of Ga., 1940.....	1947	1948
Boyce, Oren Douglas, I, 406 S. Chester Street, Gastonia; Duke, 1933.....	1945	1946
Caldwell, Jesse, Jr., ObG, 214 W. Third Street, Gastonia; McGill Univ., 1941.....	1941	1950
Cameron, Joseph Harold, GP, 1514 E. Ozark Ave., Gastonia; Geo. Wash. Univ., 1944.....	1952	1952
Chastain, Loren Lee, GP, 106 West First Street, Cherryville; Bowman Gray, 1944.....	1944	1948
†Clinton, Roland Smith, GP, 242 E. Main St., Gastonia		
Cochcroft, R. L., GP, E. Penn. Ave., Bessemer City; Med. Coll. of S. C., 1951.....	1951	1955
Davis, Rufus Jackson, GP, Box 317, Cramerton; Med. Coll. of S. C., 1946.....	1950	1951
Dickson, Brice Templeton, Jr., I, Box 335, Medical Bldg., Gastonia; Jefferson, 1944.....	1944	1950
Eckbert, William Fox, GP, 137 Eighth Avenue, Cramerton; Duke, 1939.....	1941	1942
Fesperman, Joseph Claude, GP, Box 517, Stanley; Bowman Gray, 1951.....	1951	1952
Feuer, Abe Lawrence, Hosp Res, 212 W. Second Avenue, Gastonia; Hahnemann Med. Coll., 1939.....	1947	1949
Freeman, Percy Lee, U, 406 N. Highland Street, Gastonia; Univ. of Ga., 1943.....	1947	1947
Gibbs, Stuart Wynn, R, Medical Bldg., Gastonia; Bowman Gray, 1944.....	1944	1948
Glenn, Charles Arthur, S, 218 N. Highland St., Gastonia; Med. Coll. of S. C., 1936.....	1936	1937
Glenn, Dorothy Norman, ObG, Box 906, Gastonia; Woman's Med. Coll. of Penn., 1938.....	1938	1940
Glenn, Henry Franklin, Jr., GP, 210 S. York St., Gastonia; Emory Univ., 1932.....	1932	1934
Glenn, Lucius Newton, (Hon.), S, P.O. Box 1144, Gastonia; Univ. of Md., 1897.....	1897	1904
Groves, Robert Burwell, (Hon.), GP, Lowell; Med. Coll. of Va., 1924.....	1924	1925
Groves, Robert B., Jr., GP, N. Main Street, Belmont; Med. Coll. of Va., 1953.....	1953	1954
Herrin, Hermon Keith, OALR, 212 W. 2nd St., Gastonia; Med. Coll. of Va., 1935.....	1935	1937
Horsley, William N., GP, 28 E. Woodron Avenue, Belmont; Duke, 1941.....	1946	1947
Houser, Forest Melville, GP, 106 E. Main St., Cherryville; Univ. of Penn., 1928.....	1929	1930
Jennings, Lowell E., GP, 213 W. Main Street, Gastonia; Ind. Univ., 1949.....	1949	1955
Jones, William McConnell, GP, 213 W. Main Street, Gastonia; Med. Coll. of S. C., 1922.....	1927	1928
Kingsley, William B., Path, Gaston Memorial Hospital, Gastonia; Temple, 1947.....	1954	1954
Lahser, Charles I., Pd, 318 South Street, Gastonia; Bowman Gray, 1946.....	1946	1952
Leeper, William Edward, I, 903 E. Second Avenue, Gastonia; Duke, 1943.....	1944	1952

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Lyday, Charles Emmett, (Hon.), GP, 304 Commercial Bldg., Gastonia; Atlanta School of Medicine, 1910.....	1910	1917
McAdams, Charles Rupert, (Hon.), GP, Armstrong Bldg., Belmont; N. C. Med. Coll., 1912.....	1912	1916
McConnell, Harvey Russell, S, Box 875, 210 S. York St., Gastonia; Univ. of Md., 1924.....	1927	1930
McDowell, Roy Hendrix, GP, Belmont; Univ. of Md., 1929.....	1930	1931
Miller, George R., Or, 412 Realty Bldg., Gastonia; Univ. of Rochester, 1943.....	1950	1950
Miller, Robert Carlysle, (Hon.), GP, 414 Harvie, Gastonia; N. C. Med. Coll., 1909.....	1918	1919
Moore, Burmah Dixon, (Hon.), GP, Mt. Holly; Med. Coll. of Va., 1915.....	1915	1921
Moore, Robert Love, GP, E. Pa. Avenue, Bessemer City; Med. Coll. of S. C., 1940.....	1946	1948
Morgan, Charles Herman, S, 318 South Street, Gastonia; Columbia Univ., Coll. of Phy. & S., 1944.....	1953	1953
Morris, Leslie Morgan, R, Medical Bldg., Gastonia; Bowman Gray, 1943.....	1943	1948
Parks, Walter Beatty, GP, 1051 W. Franklin St., Gastonia; Univ. of Md., 1924.....	1924	1927
Powell, Herman Sutton, GP, Box 2365, Gastonia; Univ. of Va., 1932.....	1932	1937
Prince, George Edward, Pd, 318 S. Street, Gastonia; Duke, 1944.....	1947	1948
Pugh, Charles Harrison, (Hon.), GP, Box 527, Gastonia; N. C. Med. Coll., 1910.....	1910	1910
Quickel, John Cephas, OALR, Medical Bldg., Gastonia; Univ. of Penn., 1932.....	1932	1936
Ramsaur, Jackson Towsend, PH, 146 S. York Street, Gastonia; Univ. of Chicago, 1933.....	1934	1935
Rankin, Richard E., GP, Box 565, Mt. Holly; Univ. of Va., 1950.....	1950	1952
Reid, James William, (Hon.), GP, Box 7, Lowell; Jefferson, 1908.....	1908	1909
Rice, Edmond Lee, S, Lahore, Pakistan; Emory Univ., 1931.....	1942	1943
Riddle, Harry Duff, GP, 166 W. Franklin Ave., Gastonia; Med. Coll. of S. C., 1944.....	1948	1949
Roberts, William McKinley, Or, Realty Bldg., Gastonia; Tufts, 1925.....	1928	1929
Robinson, James Lee, S, 155 S. York Street, Gastonia; Univ. of Penn., 1932.....	1932	1936
Sear, Torben, ObG, 114 W. Third St., Gastonia; Univ. of Copenhagen, 1941.....	1954	1954
Smith, Joseph Pinkney, GP, Box 1236, Gastonia; Bowman Gray, 1945.....	1945	1949
Stroupe, Albertus Ula, Jr., GP, Mount Holly; Med. Coll. of Va., 1931.....	1932	1938
Stroupe, Matthew Alfred, Jr., I & GE, Medical Bldg., Gastonia; George Wash. Univ., 1945.....	1946	1950
Tyner, Hugh Edward, S, 406 S. Chester St., Gastonia; Bowman Gray, 1946.....	1946	1954
Waggoner, Lonnie A., Jr., I, 212 West Second Avenue, Gastonia; Duke Univ., 1947.....	1953	1954
Weathers, Bailey Graham, GP, Box 246, Stanley; Med. Coll. of Va., 1929.....	1929	1941
Wilkins, Samuel A., Sr., (Hon.), GP, Retired, 1196 Springdale Rd., N. E., Atlanta 6, Georgia; Univ. of Kentucky, 1902.....	1903	1903
Will, Thomas Augustine, GP, Box 1189, Dallas; Bowman Gray, 1948.....	1949	1953

GATES COUNTY SOCIETY²⁸

OFFICERS—President:

Secretary: Payne, John A., III, (Biog. below), Sunbury

Blanchard, Thomas W., (Hon.), GP, Box 5, Hobbsville; Med. Coll. of Va., 1911.....	1911	1919
Hand, LeRoy, Jr., GP, Gates Clinic, Gatesville; Bowman Gray, 1950.....	1950	1951
Payne, John Abb, III, GP, Sunbury; Med. Coll. of Va., 1933.....	1935	1942

GRAHAM COUNTY SOCIETY²⁹

OFFICERS—President:

Secretary:

Parrette, Nettie Coffey, GP, Robbinsville; Univ. of Tenn., 1934.....	1937	1941
Parrette, Richard Grenville, GP, Robbinsville; Univ. of Tenn., 1934.....	1936	1941

GRANVILLE COUNTY SOCIETY³⁰

OFFICERS—President: Thomas, W. N., (Biog., below), Oxford

Secretary: Elliott, J. C., (Biog. below), Oxford

Bradsher, James Sidney, Jr., GP, Box 83, Stovall; Univ. of Va., 1925.....	1925	1928
Cathell, James L., P, State Hospital, Butner; Emory University, 1937.....	1937	1939
Clay, Earl Lewis, GP, Oxford; Univ. of Kentucky, 1929.....	1929	1933
Cox, Howard Lewis, GP, Box 507, Oxford; Duke Univ., 1952.....	1953	1954
Daniel, Louie Samuel, GP, Box 116, Oxford; Univ. of Md., 1940.....	1940	1946
Elliott, Julian Carr, S & GP, Box 315, Oxford; Univ. of Md., 1926.....	1926	1929
†Morris, Joseph A., (Hon.), GP, (Retired), 1209 Dwir Place, Durham; Vanderbilt, 1890.....	1893	1899
Murdoch, James Wilson, P, State Hosp., Butner; Univ. of Aberdeen, Scotland, 1924.....	1950	1952
Noblin, Roy Lee, (Hon.), S & GP, Box 1191, Main Street, Oxford; Med. Coll. of Va., 1924.....	1924	1925
Tarry, James Royster, GP, 503 College St., Oxford; Med. Coll. of Va., 1952.....	1954	1954
Tarry, William B., GP, 101 College St., Oxford; Med. Coll. of Va., 1953.....	1954	1954
Taylor, Rives W., GP, Box 1191, Oxford; Tulane, 1926.....	1926	1928
Taylor, William Louis, (Hon.), GP, Oxford; Univ. of Va., 1900.....	1901	1901
Thomas, William Nelson, (Hon.), S & GP, Main Street, Box 1191, Oxford; Med. Coll. of Va., 1911.....	1911	1914
Thompson, Joseph, (Hon.), GP, Creedmoor; Kentucky Univ., 1904.....	1907	1917
Wampler, Fred Jacob, PH, Health Dept., Oxford; Rush Univ., 1913.....	1953	1954
Watson, John William, GP, 501 Hillsboro St., Oxford; Med. Coll. of Va., 1953.....	1955	1955
Winston, Patrick Henry, GP, Box 213, Clarksville, Va.; Med. Coll. of Va., 1929.....	1929	1930

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GREENE COUNTY SOCIETY³¹

OFFICERS—President: Smith, C. G., (Biog. below), Snow Hill

Secretary: Carroll, F. W., (Biog. below), Hookerton

Carroll, Fountain Williams, GP, Hookerton; Med. Coll. of Va., 1925.....	1926	1927
Marlowe, William Anderson, (Hon.), GP, P.O. Box 426, Walstonburg; Jefferson, 1919.....	1919	1921
Smith, Charles Gordon, GP, Snow Hill; Univ. of Penn., 1940.....	1943	1943

GUILFORD COUNTY SOCIETY³²

OFFICERS—President: Sumner, E. A., (Biog. below), High Point

Secretary: Rogers, Max P., (Biog. below), High Point

Aderholdt, Marcus L., Jr., Pd, 608½ N. Main St., High Point; Univ. of Md., 1943.....	1943	1949
Allgood, John W., I, 113 Price Street, Greensboro; Emory, 1938.....	1946	1946
Ames, Richard Haight, NS, 153 Bishop Street, Greensboro; Duke, 1941.....	1948	1949
Apple, Elbert Dwight, R, 915 N. Elm Street, Greensboro; Wash. Univ., 1929.....	1929	1936
Averett, Leland S., Jr., GP, 755 N. Main St., High Point; Univ. of N. C., 1954.....	1954	1955
Banner, Charles Whitlock, (Hon.), OALR, Retired, 129 N. Elm Street, Greensboro; Univ. of Md., 1899.....	1899	1901
Barefoot, Sherwood W., D, 363 N. Elm Street, Greensboro; Duke, 1938.....	1946	1947
Beall, Lawrence Lincoln, S, 1109 Ninth St., Greensboro; Med. Coll. of Va., 1931.....	1931	1946
Beavers, Charles Lee, GP, 1016 N. Elm Street, Greensboro; Med. Coll. of Penn., 1938.....	1938	1946
Beavers, James Wallace, GP, 1016 N. Elm Street, Greensboro; Univ. of Va., 1930.....	1930	1935
Beavers, William Olive, GP, 1016 N. Elm St., Greensboro; Northwestern Univ., 1943.....	1944	1946
Benbow, Edward Perry, Jr., Pd, 104 E. Northwood Street, Greensboro; Duke, 1941.....	1943	1949
Benson, John F., I, 330 Locke St., High Point; Univ. of Md., 1946.....	1955	1955
Benton, Wayne Jefferson, GP, 514½ S. Elm St., Greensboro; Syracuse Univ., 1934.....	1934	1936
Berry, Francis, ObG, 823 N. Elm Street, Greensboro; Georgetown, 1942.....	1953	1953
Bertling, Marion Henry, ObG, 416 Jefferson Bldg., Greensboro; Western Reserve Univ., 1935.....	1948	1948
Best, James Ernest, Pd, 1008 N. Elm Street, Greensboro; Bowman Gray, 1945.....	1945	1948
Bird, Ignacio, R, 338 N. Elm Street, Greensboro; Yale, 1930.....	1946	1947
Bonner, Merle Dumont, T & A, Guilford Sanatorium, Jamestown; Univ. of Md., 1930.....	1930	1934
Bonner, Octavius Blanchard, (Hon.), OALR, 649 N. Main St., High Point; Univ. of Md., 1917.....	1920	1922
Bradley, Harold John, U, 153 Bishop Street, Greensboro; Univ. of Iowa, 1932.....	1932	1949
Brantley, Julian Thweatt, ObG, 1018 N. Elm Street, Greensboro; Harvard, 1944.....	1944	1949
Brigman, Paul H., GP, 755 N. Main St., High Point; Univ. of N. C., 1954.....	1954	1955
Brockmann, Harry Lyndon, (Hon.), S, 649 N. Main St., High Point; Univ. of Penn., 1917.....	1917	1921
Brooks, James Taylor, I, 1100 N. Elm Street, Greensboro; Univ. of Penn., 1943.....	1943	1948
Brooks, Jean Bailey, ObG, 1100 N. Elm Street, Greensboro; Bowman Gray, 1944.....	1944	1948
Brown, Frank Reid, I, 363 N. Elm Street, Greensboro; Vanderbilt, 1938.....	1946	1946
Buie, Roderick Mark, Sr., (Hon.), PH, 119 Kensington Rd., Greensboro; Jefferson, 1914.....	1914	1917
Buie, Roderick Mark, Jr., I, 113 Price Street, Greensboro; Bowman Gray, 1944.....	1944	1950
Burwell, John Cole, Jr., ObG, 101 N. Elm Street, Greensboro; Duke, 1933.....	1936	1937
Cardwell, Willard, I & C, 153 Bishop St., Greensboro; Med. Coll. of Va., 1932.....	1936	1937
Cater, Clinton Duncan, (Hon.), Ob, 324 Jefferson Bldg., Greensboro; Emory, 1920.....	1923	1924
Charlton, John D., A, 823 N. Elm St., Greensboro; Univ. of Western Ontario, Canada, 1942.....	1953	1955
Cheek, Kenneth Maurice, I, 321 Richardson Street, High Point; Bowman Gray, 1943.....	1943	1949
Clary, William Thomas, ObG, 228 Jefferson Bldg., Greensboro; Univ. of Penn., 1928.....	1928	1934
Coffey, Robert T., GP, 1601 Cornwallis Drive, Greensboro; Geo. Washington, 1953.....	1954	1954
Cole, Walter Francis, (Hon.), Or, 101 N. Elm St., Greensboro; Johns Hopkins, 1909.....	1909	1910
Collings, Ruth Mary, GP, Woman's Coll. of U.N.C., Greensboro; Univ. of Penn., 1923.....	1926	1927
Cook, Henry Lilly, Jr., (Hon.), OALR, C-2 Irving Park Manor, Greensboro; Jefferson, 1918.....	1918	1920
Cook, Joseph Lindsay, Ins, Drawer P, Pilot Life Ins. Co., Greensboro; Univ. of Penn., 1925.....	1925	1928
Cozart, Samuel Rogers, (Hon.), GP, 122 S. Greene St., Greensboro; Med. Coll. of Va., 1923.....	1923	1925
Creech, Lemuel Underwood, GP, 138 Church Street, High Point; Tulane, 1939.....	1939	1940
Cross, Almon Rufus, ObG, 649 N. Main Street, High Point; Duke, 1938.....	1947	1947
Cross, Robert V., Ob, High Point; Univ. of Pittsburg, 1947.....	1953	1953
Curtis, Dock, GP, Infirmary, WC UNC, Greensboro; Univ. of Ark., 1948.....	1953	1954
Dalton, William B., S, 120 S. Greene St., Greensboro; Univ. of Md., 1918.....	1939	1942
Davis, Joseph Franklin, (Hon.), GP, 1216 Fourteenth St., Greensboro; Med. Coll. of Va., 1912.....	1912	1914
Davis, Philip Bibb, S, 442 N. Wrenn Street, High Point; Jefferson, 1926.....	1926	1929
Davis, Richard Boyd, (Hon.), S, 122 S. Green St., Greensboro; Med. Coll. of Va., 1915.....	1916	1917
Deaton, William Ralph, Jr., S, 153 Bishop Street, Greensboro; Vanderbilt, 1935.....	1946	1948
Dees, Ralph Erastus, (Hon.), S, P.O. Box 1863, Greensboro; Univ. of Md., 1906.....	1908	1909
Doyle, Owen William, 363 N. Elm Street, Greensboro; Yale Univ., 1947.....	1954	1955
Dunn, Richard Berry, ObG, 1014 N. Elm Street, Greensboro; McGill Univ., 1933.....	1936	1937
Durham, Carey Winston, GP, 330 Southeastern Bldg., Greensboro; George Washington University, 1927.....	1927	1930
Dyer, John Wesley, GP, Route 1, High Point; Univ. of Louisville, 1916.....	1921	1921
Edwards, Vertie Edward, (Hon.), GP, Stokesdale; Univ. of Md., 1913.....	1913	1913
Ellinwood, Everett Hews, PH, 300 E. Northwood St., Greensboro; Temple, 1935.....	1935	1937

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Farmer, William Dempsey, OALR, 119 N. Elm St., Greensboro; Duke, 1934.....	1939	1939
Fincher, Robert Charles, Jr., NP, 107 Spencer Ave., High Point; Med. Coll. of S. C., 1944.....	1948	1955
Flagge, Philip Wesley, (Hon.), I, Retired, Laramie, Wyoming; Wash. Univ., 1902.....	1905	1906
Flythe, William Henry, I, 641 N. Main Street, High Point; Vanderbilt, 1933.....	1933	1937
Follo, Paige B., Pd, 1209 Magnolia St., Greensboro; Harvard, 1947.....	1954	1954
Ford, Elizabeth L., Pd, Hill Street, Greensboro; Univ. of Penn., 1943.....	1951	1951
Fortney, Austin P., GP, Box 66, Jamestown; Emory, 1946.....	1951	1952
Fortune, Alexander Fletcher, (Hon.), GP, 122 S. Greene St., Greensboro; Univ. Coll. of Med., Richmond, 1900.....	1900	1904
Fortune, Benjamin Fletcher, GP, P.O. Box 1922, Greensboro; Jefferson, 1941.....	1941	1947
Fox, Norman Albright, I, 433 Jefferson Bldg., Greensboro; Univ. of Penn., 1924.....	1924	1926
Freedman, Arthur, I & C, 1000 N. Elm Street, Greensboro; Vanderbilt, 1939.....	1946	1946
Putrell, John Marion, GP, Summerfield; Bowman Gray, 1951.....	1951	1952
Garrard, Robert Lemley, PN, 800 N. Elm Street, Greensboro; Harvard, 1932.....	1940	1941
Garrett, Norman H., Jr., I, 153 Bishop St., Greensboro; Duke, 1950.....	1952	1954
Geddie, Kenneth Baxter, (Hon.), Pd, 641 N. Main St., High Point; Jefferson, 1921.....	1921	1923
Gilliam, James S., Jr., U, 527 N. Main Street, High Point; Duke, 1941.....	1942	1950
Gilmore, Clyde Manly, I, 342 N. Elm Street, Greensboro; Med. Coll. of Va., 1925.....	1925	1926
Gray, Cyrus Leighton, R, 225 Boulevard, High Point; Duke, 1937.....	1937	1940
Grimsley, William T., GP, Box 157, Guilford College; Bowman Gray, 1952.....	1952	1953
Groome, James Gordon, (Hon.), GP, 517 N. Main St., High Point; Univ. of Cinn., 1924.....	1924	1925
Gross, Francis Warren, OALR, 517 N. Main St., High Point; Univ. of Oklahoma, 1937.....	1950	1951
Gunter, Van Wyche, Ins, Jefferson Bldg., Greensboro; Med. Coll. of Va., 1946.....	1946	1948
Harden, Robert Norman, (Hon.), S, 101 N. Elm Street, Greensboro; Univ. of Penn., 1922.....	1922	1924
Harrill, Henry Clay, U, 363 N. Elm Street, Greensboro; Johns Hopkins, 1933.....	1933	1940
Harris, Carlton McK., I, 344 N. Elm St., Greensboro; Bowman Gray, 1947.....	1948	1954
Harvey, Wallace Watson, (Hon.), Ind, 118 S. Greene St., Greensboro; Emory, 1920.....	1922	1923
Henson, Joseph Bascom, Jr., GP, 1029 Madison Avenue, Greensboro; Temple, 1945.....	1946	1951
Henson, Thomas Albert, Pd, 369 N. Elm Street, Greensboro; Temple, 1937.....	1937	1947
Holt, Duncan Waldo, (Hon.), I, 207 Piedmont Bldg., Greensboro; Jefferson, 1918.....	1918	1921
Horn, Helen A., Path, High Point Memorial Hosp., High Point; Univ. of Md., 1944.....	1952	1952
Hunt, William Jack, I, 136 Church Street, High Point; Univ. of Md., 1943.....	1943	1949
Hunter, John Gray, S, 2310 LaFayette Avenue, Greensboro; Univ. of Penn., 1943.....	1943	1951
Ingram, Charles Hal, S, 330 Locke Street, High Point; Univ. of Md., 1943.....	1943	1949
Jackson, Walter Leo, (Hon.), S, Route 4, High Point; Med. Coll. of N. C., 1911.....	1911	1913
Jennings, Royal G., D, 519 N. Main Street, High Point; Bowman Gray, 1945.....	1946	1954
Keith, Marion Yates, Pd, 369 N. Elm Street, Greensboro; Univ. of Md., 1923.....	1923	1927
Kesler, Robert Cicero, OALR, 1018 N. Elm Street, Greensboro; Tulane, 1928.....	1928	1930
King, Walter Gorringer, S, Med. Arts Bldg., Greensboro; Med. Coll. of Va., 1940.....	1950	1951
Lake, Ralph Callihan, S, 902 N. Elm Street, Greensboro; Univ. of Louisville, 1931.....	1947	1948
Leath, MacLean Bacon, OALR, 529 N. Main Street, High Point; Jefferson, 1933.....	1933	1937
LeBauer, Maurice Leon, S, 101 N. Elm Street, Greensboro; Univ. of Va., 1929.....	1930	1932
LeBauer, Sidney Ferring, I, 101 N. Elm St., Greensboro; Univ. of Va., 1929.....	1930	1932
LeGrand, Robert Hampton, S, 1016 N. Elm Street, Greensboro; Univ. of Penn., 1939.....	1939	1950
Lennon, Hershel Clanton, Path, 338 N. Elm St., Greensboro; Univ. of Penn., 1931.....	1931	1941
Lewis, Clifford Whitfield, ObG, 330 Locke St., High Point; Med. Coll. of Va., 1930.....	1930	1931
Lewis, Walter Glenn, GP, Box 32, Gibsonville; Med. Coll. of Va., 1938.....	1938	1940
Little, Howard Q. L., GP, Burlington Street, Gibsonville; Wash. Univ., 1934.....	1934	1937
Lund, Herbert Z., Path, Moses Cone Hospital, Greensboro; Univ. of Penn., 1931.....	1932	1953
Lupton, Carroll Crescent, S, 153 Bishop Street, Greensboro; Temple, 1931.....	1931	1934
Lupton, Emmett Stevenson, D, 1018 N. Elm St., Greensboro; N. Y. Univ. of Med., 1938.....	1938	1940
Lyday, Russell Osborne, S, 206 Jefferson Bldg., Greensboro; Univ. of Penn., 1920.....	1920	1927
Lynch, John Franklin, Jr., Pd, 641 N. Main Street, High Point; Jefferson, 1944.....	1944	1948
Lyon, Brockton Reynolds, (Hon.), S, 342 N. Elm St., Greensboro; Columbia Univ., 1915.....	1920	1920
Maness, Archibald Kelly, Ob, 1305 N. Elm Street, Greensboro; Jefferson, 1928.....	1928	1929
Marks, Edgar S., I, 1305 N. Elm Street, Greensboro; Bowman Gray, 1945.....	1948	1948
Mathews, Robert William, I, 232 Jefferson Bldg., Greensboro; Emory, 1932.....	1937	1938
McAlister, Jean Colvin, Pd, 104 E. Northwood Street, Greensboro; Univ. of Penn., 1933.....	1936	1937
McCain, Walkup Kennard, GP, P.O. Box 1248, High Point; Jefferson, 1929.....	1929	1930
McGee, Julian Murrill, S, 811 N. Elm Street, Greensboro; Univ. of Penn., 1925.....	1927	1928
McRae, Marvin Everett, D, 342 N. Elm St., Greensboro; Med. Coll. of Va., 1938.....	1949	1949
Merritt, Jesse Frederic, I, 342 N. Elm St., Greensboro; Northwestern Univ., 1936.....	1937	1938
Messerschmidt, Henry Carl, I, 330 Locke St., High Point; Med. Coll. of Va., 1946.....	1952	1952
Meyer, George J., GP, Box 203, Archdale; Univ. of Rochester, 1953.....	1953	1953
Miller, Ira Ben, I, 517 N. Main Street, High Point; Bowman Gray, 1946.....	1946	1951
Mills, Charles Rose, Oph, 234 Jefferson Bldg., Greensboro; Univ. of Pittsburgh, 1936.....	1938	1938
Mills, Wardell H., OALR, 201 Banner Bldg., Greensboro; Duke, 1940.....	1940	1948
Moore, John Andrew, 342 N. Elm St., Greensboro; Med. Coll. of Va., 1948.....	1954	1955
Murray, William Gray, I, 153 Bishop Street, Greensboro; Duke, 1944.....	1947	1948
Norment, William Blount, S, 101 N. Elm Street, Greensboro; Jefferson, 1922.....	1922	1932
Nowlan, Fagg Bernard, GP, Box 205, Pleasant Garden; Bowman Gray, 1946.....	1946	1949
Ogburn, Herbert Hammond, (Hon.), S, 222 Jefferson Bldg., Greensboro; Johns Hopkins, 1913.....	1913	1914
Ownbey, Arthur Dennis, GP, 415 West Gaston St., Greensboro; Med. Coll. of Va., 1920.....	1925	1927
Parham, Asa, S, 649 N. Main Street, High Point; Univ. of Penn., 1943.....	1943	1953

ROSTER OF FELLOWS

79

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Parker, Herman Richard, (Hon.), I, 301 Jefferson Bldg., Greensboro; Univ. of Syracuse, 1923.....	1924	1925
Parks, W. Craig, I, 649 N. Main Street, High Point; S. C. Med. Coll., 1938.....	1938	1940
Patterson, Fred Marion, U, 214 Elmwood Drive, Greensboro; Univ. of Penn., 1924.....	1924	1928
Perry, Glenn Grey, Pr, 136 Church Street, High Point; Med. Coll. of Va., 1933.....	1933	1934
Perry, Henry Baker, Jr., ObG, 344 N. Elm St., Greensboro; Univ. of Md., 1943.....	1943	1947
Perry, Robert E., D, 312 Jefferson Bldg., Greensboro; Univ. of Penn., 1921.....	1921	1925
Prefontaine, J. Edouard, OALR, 401 Jefferson Bldg., Greensboro; Laval University of Quebec, 1927.....	1931	1934
Rabold, Leonard James, I, 1209 Magnolia St., Greensboro; Vanderbilt, 1941.....	1948	1949
Ravenel, Samuel Fitzsimons, Pd, 104 E. Northwood, Greensboro; Johns Hopkins, 1923.....	1923	1926
Register, John Francis, Or, 137 Bishop Street, Greensboro; S. C. Med. Coll., 1931.....	1936	1937
Reid, William Joseph, GP, 1203 Fairview St., Greensboro; N. Y. Med. Coll., 1948.....	1949	1951
Reitzel, Claude Everett, (Hon.), GP, (Retired), 1105 Lindsay St., High Point; Atlanta Coll. of P. & S., 1902.....	1902	1902
Rhudy, Booker Ephram, R, Route 10, Box 286, Greensboro; Med. Coll. of Va., 1916.....	1926	1927
Richman, Samuel, 342 N. Elm St., Greensboro; Univ. of Minn., 1927.....	1954	1955
Ridge, Clyde Franklin, GP, 517 N. Main St., High Point; Med. Coll. of Va., 1922.....	1922	1946
Rogers, Max Pritchard, S, 649 N. Main Street, High Point; Duke, 1942.....	1944	1947
Rogers, Seymour Shulman, S, 1001 N. Elm St., Greensboro; N. Y. Univ. Coll. of Med., 1936.....	1949	1949
Rubin, Adrian Stevens, Pd, 342 N. Elm St., Greensboro; N. Y. Med. Coll., 1937.....	1937	1941
Rubin, M. Harvey, Oph, Jefferson Bldg., Greensboro; L. I. Coll. of Med., 1948.....	1954	1954
Sapp, Oscar LeMay, Hosp Res., Walter Reed Army Hosp., Washington 12, D. C.; Bowman Gray, 1947.....	1948	1949
Saunders, Stanley Stewart, Pd, 641 N. Main Street, High Point; Harvard, 1924.....	1926	1927
Schafer, Earle W., Or, 521½ N. Main Street, High Point; Jefferson, 1941.....	1949	1950
Schweizer, Donald Conrad, ObG, 153 Bishop St., Greensboro; Med. Coll. of Va., 1943.....	1947	1948
Sharp, Oliver Ledbetter, (Hon.), C, 101 N. Elm St., Greensboro; Jefferson, 1922.....	1924	1925
Shelburne, Palmer Augustine, I, 220 Med. Arts Bldg., Greensboro; Univ. of Va., 1927.....	1928	1928
Shepard, Karl, I, 205 W. Howell Street, High Point; Harvard, 1935.....	1939	1940
Sikes, Charles Henry, S, 333 Jefferson Bldg., Greensboro; Jefferson, 1931.....	1933	1934
Siske, Grady Cornell, GP, Pleasant Garden; Chicago Med. Coll., 1936.....	1937	1938
Slate, John William, (Hon.), GP, 203 E. Green Street, High Point; Univ. Coll. of Med., Richmond, 1900.....	1899	1925
Slate, Joseph Esmond, GP, 203 E. Green St., High Point; Tulane, 1934.....	1934	1937
Slate, Marvin Longworth, ObG & Pd, 203 E. Green St., High Point; Univ. of Md., 1931.....	1931	1934
Smith, Alick Thomas, (Hon.), GP, Retired, Route 3, Box 391B, Greensboro; Med. Coll. of Va., 1908.....	1910	1913
Smith, Opie Norris, I, 363 N. Elm Street, Greensboro; Univ. of Penn., 1933.....	1938	1938
Smith, Roy Meadows, Pd, 1023 N. Elm St., Greensboro; Univ. of Penn., 1934.....	1934	1937
Sparrow, Harry Ward, I, 342 N. Elm St., Greensboro; Northwestern Univ., 1943.....	1944	1947
Spencer, Richard Earl, Anes, 1200 N. Elm St., Greensboro; Albany Med. Coll., 1946.....	1952	1952
Stanton, T. M., (Hon.), S, 212 E. Grove St., High Point; Med. Coll. of Va., 1916.....	1916	1917
Starr, Henry Frank, (Hon.), Ins, Jefferson Standard Life Ins. Co., Greensboro; Jefferson, 1916.....	1916	1917
Starr, H. Frank, Jr., GP, Box P, Greensboro; Jefferson, 1948.....	1951	1951
Stevens, Joseph Blackburn, I & N, 363 N. Elm Street, Greensboro; Duke, 1935.....	1940	1940
Stirewalt, Neale Summers, GP, 118½ N. Main St., Box 1848, High Point; Univ. of Md., 1909.....	1915	1927
Stovall, Horace Henry, S, 1018 N. Elm Street, Greensboro; Tulane, 1943.....	1947	1950
Strickland, Horace Gilmore, OALR, 101 N. Elm St., Greensboro; Univ. of Md., 1930.....	1930	1937
Sumner, Emmett Ashworth, S, 649 N. Main St., High Point; Baylor Univ., 1925.....	1926	1927
Taliaferro, Richard McC., S, 153 Bishop Street, Greensboro; Duke, 1941.....	1948	1949
Tankersley, James William, (Hon.), S, 823 N. Elm St., Greensboro; Jefferson, 1906.....	1906	1906
Tannenbaum, Abraham Jack, I, 823 N. Elm Street, Greensboro; Duke, 1935.....	1937	1940
Taylor, Frederick Raymond, (Hon.), I, 1113 Johnson St., High Point; Univ. of Penn., 1913.....	1913	1915
Taylor, James Nathaniel, (Hon.), GE, 105 S. Tremont Drive, Greensboro; Med. Coll. of Va., 1901.....	1902	1905
Taylor, Shahane Richardson, (Hon.), OALR, 319 Jefferson Bldg., Greensboro; Univ. of Penn., 1921.....	1921	1924
Thomas, Julius Graham, (Hon.), GP, 122 S. Greene St., Greensboro; Med. Coll. of Va., 1915.....	1915	1920
Thompson, Claude Durant, (Hon.), GP, 809 Willowbar Terrace, High Point; Univ. of Tenn., 1901.....	1901	1904
Tice, Walter Thomas, I, 649 N. Main Street, High Point; Jefferson, 1927.....	1927	1929
Troxler, Eulyss Robert, Or, 1000 N. Elm Street, Greensboro; Duke, 1938.....	1947	1948
Tyson, Thomas David, Jr., ObG, 649 N. Main St., High Point; Johns Hopkins, 1933.....	1933	1938
Tyson, Woodrow Wilson, I, 641 N. Main St., High Point; Med. Coll. of Va., 1935.....	1935	1938
Vatz, Benjamin, I, 1001 N. Elm Street, Greensboro; Duke, 1945.....	1945	1950
Vaughan, Edwin Warner, I, 342 N. Elm Street, Greensboro; Univ. of Va., 1937.....	1940	1940
Walker, Ernest Thayer, R, 122 S. Greene St., Greensboro; Univ. of Kansas, 1937.....	1939	1949
Wallin, Loren, PH, 9336 Montlien St., High Point; Univ. of Tenn., 1909.....	1909	1938
Warwick, Hight Claudius, Anes, 338 N. Elm St., Greensboro; Med. Coll. of Va., 1934.....	1934	1936
Watson, Hugh Alfred, S, 420 Jefferson Bldg., Greensboro; Med. Coll. of Va., 1930.....	1930	1941

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Whisnant, Charles L., Jr., I, 113 Price St., Greensboro; Univ. of Penn., 1951.....	1951	1955
Whittington, Claude Thomas, S. Med. Arts Bldg., Greensboro; Univ. of Md., 1927.....	1927	1929
Wilkinson, Louis Lee, S, 631 N. Main Street, High Point; Univ. of Va., 1926.....	1941	1941
Williams, John Drewey, (Hon.), GP, Guilford Station; Vanderbilt, 1898.....	1898	1898
Williams, John Dudley, Jr., ObG, 127 Stafford Place, Greensboro; Temple, 1930.....	1931	1935
Wilson, John Knox, Pd, 1209 Magnolia Street, Greensboro; Jefferson, 1943.....	1949	1949
Wolfe, Hugh Claibourne, (Hon.), OALR, 100 Wolfe Med. Bldg., Greensboro; Med. Coll. of Va., 1917.....	1917	1920
Wood, George Thomas, Jr., S, 330 Locke Street, High Point; Jefferson, 1928.....	1928	1935
Wood, William Reed, ObG, 344 N. Elm St., Greensboro; Univ. of Louisville, 1938.....	1938	1947
Woodruff, Fred Gwyn, (Hon.), GP, 641 N. Main St., High Point; Med. Coll. of Va., 1917.....	1917	1919
York, Alexander Arthur, (Hon.), GP, Route 1, High Point; Chattanooga Med. Coll., 1907.....	1907	1908

HALIFAX COUNTY SOCIETY³³

OFFICERS—President: Jarmon, F. G., Jr., (Biog. below), Roanoke Rapids Secretary: McLean, H. H., (Biog. below), Roanoke Rapids		
Beekwith, Robert Payne, (Hon.), GP, Roanoke Rapids Hosp., Roanoke Rapids; Univ. of Penn., 1911.....	1913	1916
Blowe, Ralph Boyd, GP, 800 Washington Ave., Weldon; Med. Coll. of Va., 1938.....	1938	1941
Boone, John W., Jr., GP, 600 Roanoke Ave., Roanoke Rapids; Bowman Gray, 1951.....	1951	1954
Broun, Matthew Singleton, (Hon.), OALR, P.O. Box 105, 606 Roanoke Ave., Roanoke Rapids; Columbia, 1919.....	1922	1923
Covington, John Malloy Clayton, OALR, 4 West Second Street, Roanoke Rapids; Univ. of Va., 1929.....	1930	1933
Craig, William Kenneth, GP, Enfield; Bowman Gray, 1946.....	1947	1954
Fleetwood, Joseph Anderton, Jr., GP, USS Glacier, AGB-4, C/o FPM, New York N. Y.; Bowman Gray, 1947.....	1948	1950
Hall, William Dewey, GP, P.O. Box 388, Roanoke Rapids; Med. Coll. of S. C., 1932.....	1933	1934
Jarman, Fontaine Graham, Sr., (Hon.), S, 402 Hamilton Street, Roanoke Rapids; Univ. Coll. of Med., Va., 1911.....	1914	1916
Jarman, Fontaine Graham, Jr., S, 429 Sunset Ave., Roanoke Rapids; Med. Coll. of Va., 1943.....	1952	1952
Joyner, Powell Winfred, GP, Box 95, Enfield; Syracuse Univ., 1932.....	1932	1935
Knox, Richard Earl, GP, P. O. Box 668, Rosemary Med. Clinic, Roanoke Rapids; Univ. of Manitoba, Canada, 1945.....	1947	1949
Kroncke, Fred George, I, Roanoke Rapids; Univ. of Wisconsin, 1937.....	1941	1942
Lassiter, James Alexander, GP, 108 Washington Avenue, Weldon; Jefferson Med. Coll., 1953.....	1953	1954
Maddrey, Milner Crocker, S, 643 Roanoke Ave., Roanoke Rapids; Jefferson Med. Coll., 1931.....	1931	1937
McLean, Harry Herndon, III, GP, 416 Roanoke Ave., Roanoke Rapids; Wash. Univ., 1953.....	1953	1954
Neville, Cecil Howell, GP, Box 158, Scotland Neck; Tulane Univ., 1927.....	1927	1928
Palmer, Horace, (Hon.), GP, Warren Building, Littleton; Atlanta Sch. of Med., 1912.....	1912	1920
Parker, J. W., Jr., GP, Seaboard; Medical College of Virginia, 1927.....	1927	1929
Prince, John S., GP, 412 Ingleside Ave., Emporia, Virginia; Med. Coll. of Va., 1952.....	1954	1955
Robertson, Carroll Bracev, GP, P.O. Box 544, Jackson; Med. Coll. of Va., 1933.....	1934	1938
Schools, Percy E., Jr., I, Rosemary Clinic, Roanoke Rapids; Med. Coll. of Va., 1943.....	1953	1954
Smith, Oscar Fennell, (Hon.), GP, Scotland Neck; Univ. Coll. of Med., Richmond, 1899.....	1899	1905
Suiter, Wester Ghio, (Hon.), GP, 6 W. 4th St., Weldon; Med. College of Va., 1917.....	1917	1920
Sutton, Julian Theoplous, GP, Church St., Scotland Neck; Univ. of Md., 1951.....	1951	1953
Taylor, Thomas Jefferson, GP, 643 Jackson St., Roanoke Rapids; Jefferson, 1934.....	1934	1937
Viser, Edward Taylor, GP, 600 Jackson St., Roanoke Rapids; Univ. of Penn., 1953.....	1953	1954
Weathers, Bahnson, (Hon.), S, 705 Roanoke Ave., Roanoke Rapids; Wash. Univ., 1917.....	1921	1922
White, Francis Willard Moody, (Hon.), GP, Box 545, Halifax; Med. Coll. of Va., 1924.....	1924	1924
Wood, Sherrod N., GP, Enfield; Jefferson Med. Coll., 1950.....	1950	1952
Woodburn, Clark Harold, GP, Littleton; Med. Coll. of Va., 1940.....	1940	1944
Young, Robert Foster, PH, 401 Roanoke Ave., Roanoke Rapids; Emory Univ., 1937.....	1939	1940

HARNETT COUNTY SOCIETY³⁴

OFFICERS—President: Stanfield, W. W., (Biog. below), Dunn Secretary: Blackmon, B. B., (Biog. below), Buies Creek		
Adair, William Edward, GP, Box 578, Erwin; Temple, 1938.....	1938	1941
Blackmon, Bruce Bernard, GP, Buies Creek; Bowman Gray, 1951.....	1951	1953
Byrd, Charles W., GP, P.O. Box 708, Dunn; Temple, 1940.....	1940	1947
Corbett, Clarence Lee, GP, Broad Street, Dunn; Emory Univ., 1927.....	1927	1928
Doffermyre, Luther Randolph, GP, Box 708, Dunn; Temple Univ., 1938.....	1938	1939
Eldridge, Harvey A., OALR, 111 North Wilson Street, Dunn; Med. Coll. of Va., 1934.....	1934	1936
Griffin, Leslie W., GP, Erwin; Jefferson, 1941.....	1941	1946
Holt, William Preston, (Hon.), S, Erwin; Jefferson, 1895.....	1895	1901
Hunter, William Blair, (Hon.), PH, County Health Dept., Lillington; Univ. of Penn., 1911.....	1913	1920
Johnson, Gale Denning, S, The Doctor's Office Bldg., North Wilkesboro; Jefferson, 1944.....	1944	1947
Johnson, John Ralph, GP & S, Hotel Building, Dunn; Med. Coll. of Va., 1932.....	1932	1941

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Lilly, William H., GP, Dunn; Univ. of Va., 1953.....	1953	1954
Mabe, Henderson David, Jr., GP, Erwin; Bowman Gray, 1950.....	1950	1952
Martin, John Floyd, (Hon.), OALR, Box 186, 100 E. Broad St., Dunn; N. C. Med. Coll., 1905.....	1905	1908
Moore, William Donald, GP, Coats; Med. Coll. of Va., 1944.....	1947	1950
Peede, Alvin Wortham, GP, Lillington; Jefferson, 1930.....	1930	1933
Poole, Marvin Bailey, GP, Cotton-Dale Hotel Bldg., Dunn; Med. Coll. of Va., 1938.....	1938	1941
Stanfield, William Wesley, S, Cotton-Dale Hotel Bldg., Dunn; Med. Coll. of Va., 1932.....	1932	1940
Williford, John Kenneth, GP, Box 237, Lillington; Bowman Gray, 1946.....	1946	1948
Wilson, Stephen Glenn, GP, Box 513, Angier; Med. Coll. of Va., 1930.....	1930	1932

HAYWOOD COUNTY SOCIETY³⁵

OFFICERS—President: Matthews, Hugh A., (Biog. below), Canton		
Secretary: Hudson, W. R., (Biog. below), Canton		
Brown, Alan Reid, R, Haywood County Hospital, Waynesville; Michigan, 1941.....	1953	1953
Davis, Jack B., GP, Box 707, Masonic Bldg., Waynesville; Harvard, 1948.....	1952	1952
Dickerson, Andrew Jackson, Masonic Temple Bldg., Waynesville; Bowman Gray, 1948.....	1949	1955
Duckett, Virgil Howard, GP, Box 592, Canton; Univ. of Penn., 1930.....	1930	1932
Fender, James Earle, GP, Masonic Temple Bldg., Waynesville; Med. Coll. of S. C., 1945.....	1948	1949
Hammett, Doris Bixley, Pd, Box 827, Waynesville; Kansas, 1948.....	1952	1952
Hudson, William R., GP, 21 Park St., Canton; Bowman Gray, 1951.....	1951	1953
†Jabaut, Seward W., PH, 67 Balsam Drive, Waynesville; Med. Coll. of Va., 1931.....	1954	1955
Kearse, William Oliver, GP, Box 232, Canton; Emory, 1950.....	1951	1951
Lancaster, Newton Faris, GP, Masonic Temple Bldg., Waynesville; Med. Coll. of Va., 1931.....	1932	1933
Matthews, Hugh Archie, GP, 44 Academy Street, Canton; Duke, 1943.....	1947	1947
Moore, Roy Hardin, GP, Box 909, Medical Building, Canton; Washington Univ., 1931.....	1931	1934
Owen, Margaret Lineberry, GP, 127½ Main Street, Canton; Univ. of Penn., 1932.....	1932	1936
Owen, Robert Harrison, S, 127½ Main Street, Canton; Univ. of Penn., 1931.....	1931	1935
Owen, William Boyd, GP, Box 289, 1426 N. Main St., Waynesville; Univ. of Penn., 1942.....	1942	1946
Pate, James Frank, GP, Box 298, 119½ Main St., Canton; Med. Coll. of S. C., 1927.....	1927	1929
Reeves, Jerome Lyda, (Hon.), GP, Medical Bldg., Canton; Vanderbilt Univ., 1913.....	1913	1917
Roberson, Robert Stuart, GP, 102 Brown Ave., Hazelwood; Med. Coll. of Va., 1930.....	1930	1932
Russell, Jesse Milton, (Hon.), GP, 127½ Main St., Canton; Univ. of Nashville, 1911.....	1911	1912
Smith, Albert Heyward, Jr., GP, Waynesville; Bowman Gray, 1951.....	1951	1952
Stretcher, Robert Hatfield, GP, 25 Church St., Waynesville; Rush Med. Coll., 1927.....	1927	1930
Stringfield, James King, GP, Box 347, Waynesville; Jefferson Med. Coll., 1951.....	1951	1953
Stringfield, Thomas, Jr., GP, Main St., Waynesville; Med. Coll. of State of S. C., 1934.....	1934	1937
Westmoreland, Joseph Robert, GP, Medical Bldg., Canton; Washington Univ., 1932.....	1932	1934

HENDERSON COUNTY SOCIETY³⁶

OFFICERS—President: Porter, R. A. (Biog. below), Hendersonville		
Secretary: Moore, P. J., Jr., (Biog. below), Fletcher		
Bailey, Joseph P., GP, 117 Fifth Ave., Hendersonville; Med. Coll. of S. C., 1943.....	1947	1948
Bond, George F., GP, Valley Clinic & Hospital, Bat Cave; McGill Univ., 1945.....	1946	1946
Brown, James Stevens, Sr., (Hon.), GP, Box 760, Hendersonville; Northwestern Univ., 1893.....	1894	1895
Burch, William Hobart, GP, Bat Cave; Western Reserve Univ., 1950.....	1953	1954
Cosgrove, Kenneth Edward, I, 501 Sixth St., Hendersonville; New York Univ. Coll. of Med., 1946.....	1953	1953
Cree, Maurie B., S, Prof. Bldg. Arcade, Hendersonville; Duke, 1934.....	1939	1940
Deeds, Charles Ross, Pr, P.O. Box 1246, Hendersonville; Eclectic Med. Coll., 1916.....	1945	1949
Fortescue, William Nicholas, GP & S, Box 16, Hendersonville; Duke Univ., 1934.....	1934	1936
Jones, Florantine Barker, Jr., OALR, Professional Building, Hendersonville; Jefferson, 1918.....	1951	1951
Joyner, Theodore Harold, GP, 419 Wall St., Hendersonville; Coll. of Med. Evangelists, 1940.....	1949	1949
Kaufman, Karl F., R, Pardee Memorial Hospital, Hendersonville; Ohio State Univ., 1935.....	1948	1949
King, Duncan Ingraham Campbell, GP, 113 Fifth Ave., W., Hendersonville; S. C. Med. Coll., 1935.....	1936	1937
Kirk, William Redin, (Hon.), I, 118 E. Fifth Avenue, Hendersonville; Central Univ., Ky., 1891.....	1901	1903
Lamplay, William A., S, 433 N. Church Street, Hendersonville; Univ. of Md., 1944.....	1945	1954
Latourette, K. A., Path, Pardee Mem. Hosp., Hendersonville; N. Y. U. Coll. of Med., 1939.....	1939	1955
Lenton, Charles T., Jr., GP, Gen. Delivery, Horse Shoe; Univ. of Penn., 1952.....	1953	1954
Lutz, James Dwight, GP, 600 Fifth Avenue, West, Hendersonville; Duke, 1945.....	1948	1949
Major, Richard Smart, ALR, Commercial Building, Hendersonville; Johns Hopkins, 1916.....	1944	1944
McCune, Frank Watt, GP, 600 Fifth Ave., W., Hendersonville; Duke, 1945.....	1948	1949
McDonald, Lester Bowman, I, 726 Fifth Ave., W., Hendersonville; Jefferson, 1934.....	1934	1935
Moore, Pierce Jones, Jr., GP, Mt. Sanitarium & Hosp., Fletcher; Coll. of Med. Evang., 1944.....	1947	1953

†Deceased

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Pearson, Arthur A., GP, Mt. Sanitarium, Fletcher; Coll. of Med. Evang., 1937.....	1939	1940
Porter, Richard A., GP, 5th Ave., W., Hendersonville; Western Reserve Univ., 1943.....	1947	1948
Raiford, Fletcher Lindsay, Pd, 416 Church St., Hendersonville; Med. Coll. of Va., 1941.....	1951	1951
Romeo, Bruno J., I, 501 Sixth Ave., W., Hendersonville; N. Y. Univ. Coll. of Med., 1942.....	1951	1953
Salley, Edward McQueen, (Hon.), GP, 124 W. Fourth Ave., Hendersonville; Univ. of Md., 1905.....	1905	1908
Sample, Robert Cannon, (Hon.), GP, Box 643, Hendersonville; Univ. of Penn., 1915.....	1915	1920
Silsby, Harry Zettleneyer, GP, 133½ W. Fourth Ave., Hendersonville; Louisiana State University, 1936.....	1946	1954
Sumner, Thomas W., (Hon.), GP, Fletcher; Jefferson, 1910.....	1910	1911
Trotter, Fred Oscar, S, Fifth Ave. Clinic, Hendersonville; Univ. of Minnesota, 1933.....	1934	1934
Ulloth, Gustave, GP, Fletcher; College of Medical Evangelists, 1932.....	1939	1941

HERTFORD COUNTY SOCIETY³⁷

OFFICERS—President: McLean, A. A., (Biog. below), Murfreesboro

Secretary: Ruffin, J. B., (Biog. below), Ahoskie

Anderson, Robert A., S, 405 Colony Avenue, Ahoskie; Johns Hopkins, 1943.....	1950	1951
Boyette, Dan P., Pd, 217 West Main Street, Ahoskie; Univ. of Va., 1943.....	1943	1948
Calvert, Samuel J., I, Colony Ave., Ahoskie; Bowman Gray, 1947.....	1947	1955
Cooke, Quinton Edwin, GP, Murfreesboro; Med. Coll. of Va., 1937.....	1937	1939
Credle, Carroll Spencer, GP, P.O. Box 2118, Ahoskie; Med. Coll. of Va., 1932.....	1932	1941
Eagles, Archie Y., I, 407 Colony Ave., Ahoskie; Duke, 1939.....	1946	1947
Fields, James Armstead, Ph, P. O. Box 366, Ahoskie; Med. Coll. of Va., 1917.....	1941	1941
Frank, Joe L., R, Roanoke-Chowan Hospital, Ahoskie; Columbia Univ., 1943.....	1955	1955
Futrell, Lokie Melton, (Hon.), GP, Box 5185, Murfreesboro; Med. Coll. of Va., 1914.....	1914	1918
Keller, John Haney, GP, Box 71, Ahoskie; Tulane, 1939.....	1946	1949
Matheson, Jos. Gaddy, OALR, Box 352, Ahoskie; Jefferson, 1929.....	1929	1931
McLean, A. A., GP, Box 5065, Murfreesboro; Medical Coll. of Va., 1945.....	1945	1948
Mitchell, Paul Hayne, (Hon.), GP, Box 5, Ahoskie; Univ. Coll. of Med., Richmond, 1907.....	1907	1908
Ruffin, Jennings Bryan, GP, 123 R. R. St., Ahoskie; Med. Coll. of Va., 1937.....	1937	1942
Wadsworth, George H., S, Colony Avenue, Ahoskie; Univ. of Cinn., 1935.....	1947	1948
Walker, Louis Kyle, (Hon.), GP, P.O. Box 347, Ahoskie; Univ. of Md., 1911.....	1911	1917

HOKE COUNTY SOCIETY³⁸

OFFICERS—President: Gentry, W. H., (Biog. below), McCain

Secretary: Stevens, Herman D., (Biog. below), McCain

Gentry, William Harold, T, McCain Sanatorium, McCain; Duke, 1948.....	1949	1950
Hewitt, Willard C., T, N. C. Sanatorium, McCain; Univ. of Va., 1943.....	1943	1951
Hiatt, Joseph Spurgeon, Jr., I & T, 208 S. Broad St., Southern Pines; Duke, 1939.....	1941	1945
Johnsen, Lynn L., T, N. C. Sanatorium, McCain; Univ. of Wisconsin, 1943.....	1948	1949
Johnson, L. Meredith, T, Blueridge Sanatorium, Charlottesville, Va.; Med. Coll. of Va., 1939.....	1939	1944
Jordan, Riley Moore, GP, 120 E. Elmwood Street, Raeford; Bowman Gray, 1951.....	1951	1953
Matheson, Robert Arthur, GP, Box 215, Raeford; Jefferson, 1926.....	1926	1928
Morris, Marshall, T, Massachusetts Memorial Hosp., Boston 18, Mass.; Bowman Gray, 1946.....	1946	1952
Murray, Robert Lebby, (Hon.), GP, Box 216, Raeford; Univ. of Md., 1923.....	1923	1925
O'Briant, Albert Lee, (Hon.), GP, P.O. Box 245, Raeford; Jefferson, 1920.....	1920	1922
Peck, William Merrill, T, McCain; Univ. of Iowa, 1937.....	1941	1942
Stevens, Herman D., T, Box H, McCain; Jefferson Med. Coll., 1938.....	1938	1954
Verhoeff, Dirk, Pd, Mecklenburg County Sanatorium, Huntersville; Med. Sch. of Univ. of Utrecht, Netherlands, 1933.....	1954	1954

HYDE COUNTY SOCIETY

IREDELL-ALEXANDER COUNTIES SOCIETY³⁹

OFFICERS—President: Palmes, Wesley C., Jr., (Biog. below), Statesville

Secretary: Ward, Ernest, (Biog. below), Statesville

Applewhite, Calvin Winfield, S, 222 N. Center St., Statesville; Vanderbilt, 1943.....	1952	1953
Aycock, James Bernice, R, 153 E. Broad St., Statesville; Bowman Gray, 1944.....	1944	1950
Bittinger, Charles Lewis, GP, 146 E. McLelland Ave., Mooresville; Univ. of Va., 1935.....	1936	1937
Bonner, Mack Stuart, GP, Troutman; Med. Coll. of Ga., 1952.....	1954	1955
Brandon, William Rockwell, ALR, Box 788, Statesville; Univ. of Maryland, 1914.....	1914	1948
Caldwell, Eston Robert, Jr., I, 709 W. End Ave., Statesville; Bowman Gray, 1945.....	1945	1953
Carpenter, Forest LaFon, Jr., S, H. F. Long Hosp., Statesville; Johns Hopkins, 1933.....	1948	1948
Clayton, Milton Burns, OALR, 738 Southern Ry. Bldg., Washington 5, D. C.; Univ. of Louisville, 1917.....	1933	1935
Crouch, Thomas Dalton, (Hon.), GP, Stony Point; Univ. of Md., 1910.....	1909	1915
†Davis, James Wagner, (Hon.), S, Davis Hosp., Statesville; Univ. of Penn., 1913.....	1913	1915
Deaton, Paul McNeely, GP, 766 Hartness Rd., Statesville; Univ. of Penn., 1939.....	1939	1948
Dick, Frederick William, I, 760 Hartness Road, Statesville; Duke, 1950.....	1954	1954

†Deceased

ROSTER OF FELLOWS

83

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Gibson, Laurence Osborne, (Hon.), ObG, P.O. Box 671, Statesville; N. C. Med. Coll., 1913.....	1913	1915
Givens, George H., Jr., GP, Taylorsville; Bowman Gray, 1947.....	1948	1950
Goode, Thomas Vance, (Hon.), S. H. F. Long Hosp., Statesville; Univ. of Va., 1912.....	1912	1916
Goode, Thomas V., III, S. H. F. Long Hospital, Statesville; Med. Coll. of Va., 1943.....	1947	1949
Griffin, Thomas Ray, GP, Box 328, Troutman; Bowman Gray, 1947.....	1948	1950
Hardaway, John Stegar, GP, 238 West Broad Street, Statesville; Bowman Gray, 1952	1952	1954
Henderson, Andrew McKnitt, Jr., GP, 252 West McLelland St., Mooresville; Bowman Gray, 1950.....	1950	1952
Henninger, Joseph Baylor, I, H. F. Long Hospital, 652 Davie Ave., Statesville; Northwestern Univ., 1945.....	1945	1951
Holbrook, Joseph Samuel, I & C, Davis Hosp., Statesville; Univ. of Penn., 1932.....	1932	1934
Kutteh, Hanna C., ObG, 224 N. Center St., Statesville; American Univ., Beirut, Lebanon, 1947.....	1951	1953
Little, Lonnie Marcus, GP, 113 W. Broad St., Statesville; Jefferson Med. Coll., 1925.....	1925	1927
Littleton, Louisa Chandler, Pd, 626 Salisbury Rd., Statesville; Geo. Wash. Univ., 1945	1951	1952
Lurie, Allan Irwin, GP, 905 N. Center St., Statesville; La. State Univ. Sch. of Med., 1949.....	1951	1954
MacBrayer, Lewis Burgin, III, Pd, Medical Arts Clinic, Mooresville; Med. Coll. of S. C., 1946.....	1946	1946
McLelland, William Davies, (Hon.), S, Lowrance Hospital, Mooresville; Jefferson Med. Coll., 1913.....	1913	1917
Moffett, Alexander Stuart, S, Alexander County Mem. Hosp., Taylorsville; Vanderbilt University, 1932.....	1942	1943
Morrison, James Rudy, GP, Box 749, 153 E. Broad St., Statesville; Georgetown, 1934.....	1935	1936
Munday, Perry Ligon, OALR, N. Tradd St., Statesville; Albany Med. Coll., 1938.....	1953	1954
Nicholson, John Harvey, II, I, The Goode Clinic, Statesville; Med. Coll. of Va., 1945.....	1945	1954
Painter, William Watson, S, 417 East Statesville Ave., Mooresville; Med. Coll. of S. C., 1937.....	1943	1945
Palmes, Wesley C., Jr., S, 403 W. Broad St., Statesville; Univ. of Va., 1946.....	1952	1953
Pressly, David L., GP, Stearns Building, Statesville; Jefferson, 1942.....	1942	1946
Pressly, James Lowry, I, 303 Davie Ave., Statesville; Jefferson Med. Coll., 1925.....	1925	1928
Prusa, Victor H., GP, Alexander Co. Hosp., Taylorsville; Univ. of Iowa, 1936.....	1939	1946
Rhyne, Sam Albertus, (Hon.), GP, 407 Walnut St., Statesville; N. C. Med. Coll., 1915	1915	1920
Robertson, James Mebane, GP, Harmony; Temple Univ., 1932.....	1932	1934
Shaw, Lloyd Roosevelt, Ob, 709 W. End Ave., Statesville; Med. Coll. of Va., 1930.....	1930	1931
Skeen, Leo Brown, GP, Box 208, 700 N. Main St., Mooresville; Univ. of Md., 1935.....	1935	1935
Sloan, Allen Barry, GP, Box 239, Mooresville; Med. Coll. of Va., 1924.....	1924	1926
Stegall, John Thomas, GP, 132 North Tradd St., Statesville; Univ. of Md., 1943.....	1947	1948
Stewart, John Reagan, OALR, Davis Hospital, Statesville; Tulane, 1935.....	1951	1952
Tatum, Roy Carroll, (Hon.), GP, Court House Square, Taylorsville; Jefferson, 1919.....	1919	1920
Taylor, George Winston, (Hon.), S, 417 Statesville Ave., Mooresville; N. C. Med. Coll., 1906.....	1906	1907
Thurston, Asa, (Hon.), GP, Taylorsville; Univ. of Md., 1909.....	1909	1914
Walker, Harry Gordon, GP, 132 N. Tradd St., Statesville; Univ. of Va., 1949.....	1949	1953
Ward, Ernest, PH, P.O. Box 1268, Statesville; Baylor Univ., 1918.....	1947	1947
Warner, Willis Arden, Davis Hospital, Statesville; Univ. of Wisconsin, 1953.....	1954	1955
Wrenn, Creighton, S, 435 Statesville Avenue, Mooresville; Tulane, 1935.....	1936	1938

JACKSON-SWAIN COUNTIES SOCIETY⁴⁰

OFFICERS—President: Barnes, Henry, (Biog. below), Cullowhee		
Secretary: Dewees, Philip E., (Biog. below), Sylva		
Bacon, Harold Lyle, GP, Bryson City; Northwestern Univ., 1934.....	1935	1936
Barnes, Henry F., Cullowhee; Duke, 1950.....	1952	1953
Daniel, Roy David, Pd, Ferguson Bldg., Sylva; Duke, 1942.....	1947	1949
Dewees, Philip E., GP, Box 217, Sylva; Univ. of Penn., 1950.....	1951	1952
Durr, Walter J., S, Box 855, Sylva; Long Island Coll. of Med., 1937.....	1937	1952
Hooper, Delos D., (Hon.), GP, Retired, Sylva; Med. Coll. of Va., 1905.....	1905	1905
Kirchberg, Roy William, GP, Ferguson Bldg., Sylva; Tulane, 1933.....	1935	1936
Mitchell, William E., GP, Box 536, Bryson City; Univ. of Tenn., 1945.....	1950	1950
Morgan, Ralph Siler, I, Ferguson Bldg., Sylva; Univ. of Chicago, 1941.....	1941	1948
Oliver, James E., GP, Bryson City; Jefferson, 1951.....	1952	1954
Painter, John B., GP, P.O. Box 7, Cullowhee; Bennett Med. Coll., 1915.....	1947	1948
Slagle, Thomas Dick, S, Box 456, Sylva; Cornell Univ., 1932.....	1945	1946
Wilkes, Grover, (Hon.), GP, Hooper Building, Sylva; N. C. Med. Coll., 1916.....	1916	1920

JOHNSTON COUNTY SOCIETY⁴¹

OFFICERS—President: Olsen, Robert M., (Biog. below), Kenly		
Secretary: Butler, Cary J., (Biog. below), Four Oaks		
Alderman, Edward H., GP, Drawer P, Four Oaks; Med. Coll. of Va., 1945.....	1945	1948
Aycock, Francis Marion, GP, P.O. Box 56, Princeton; Med. Coll. of Va., 1921.....	1921	1926
Batten, Woodrow, I, 5561 Salerno Rd., Jacksonville 10, Florida; Bowman Gray, 1944.....	1949	1949
Bolin, Grover Cleveland, Jr., R, 423 Hancock St., Johnston Mem. Hosp., Smithfield; Med. Coll. of S. C., 1948.....	1955	1955
Butler, Carey J., GP, Box 436, Four Oaks; Med. Coll. of Va., 1952.....	1952	1954

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Chapin, John H., GP, Box 151, Benson; Univ. of Alabama, 1952.....	1952	1954
Cheek, Thomas, S. Smithfield; Med. Coll. of Va., 1947.....	1947	1955
Cliff, Benjamin Franklin, (Hon.), GP, Box 277, Benson; George Wash. Univ., 1908.....	1909	1915
Cole, Herman A., GP, Box 216, Clayton; Univ. of Va., 1937.....	1938	1949
Daniel, Thomas Manning, Pd. 332 South Third Street, Smithfield; Duke, 1951.....	1954	1954
Davidian, Vartan Amber, S. 727 Hancock St., Smithfield; Univ. Kiev., Russia, 1919.....	1929	1930
Duncan, Stacy Allen, (Hon.), GP, Box 336, Benson; Tulane, 1924.....	1924	1925
Dunnagan, William A., GP, Box 35, Clayton; Univ. of Maryland, 1951.....	1951	1953
Earp, Raymond Elmore, S. (Retired), Brookhill Farms, Selma; Univ. of Penn., 1928.....	1928	1941
Fitzgerald, John Herbert, (Hon.), OALR, Upchurch Bldg., Smithfield; Jefferson, 1920.....	1920	1921
Grady, Edward Stephen, PH, Box 447, Smithfield; Tulane, 1937.....	1937	1942
Hinnant, Milford, (Hon.), GP, Micro; Univ. of Md., 1912.....	1912	1913
Hunter, Shelton Brinson, Jr., GP, P.O. Box 128, Kenly; Med. Coll. of Va., 1940.....	1941	1946
Jackson, Marshall Vaden, GP, Box 87, Princeton; Univ. of Md., 1930.....	1930	1937
Jones, Donnie Hue, Jr., GP, P.O. Box 67, Princeton; Univ. of Va., 1942.....	1942	1947
Lassiter, Will Hardee, Jr., GP, Smithfield; Med. Coll. of Va., 1938.....	1938	1939
Lee, Allen Henry, GP, N. Raiford Street, Selma; Jefferson, 1946.....	1947	1949
McLemore, George A., (Hon.), GP, Box 120, Smithfield; Univ. of N. C., 1906.....	1906	1906
McLemore, George Ammie, Jr., I, 721 Huntington Ave., Boston 15, Mass.; Harvard, 1948.....	1948	1955
Oliver, Robert Deleon, OALR, Selma; Univ. of Md., 1930.....	1930	1932
Olson, Robert M., OALR, P.O. Box 126, Kenly; George Wash. Univ., 1932.....	1951	1951
Poteat, Hubert McNeill, Jr., S. 207 S. Third St., Smithfield; Jefferson, 1940.....	1940	1951
Rose, Abraham Hewitt, (Hon.), GP, Smithfield; Jefferson, 1906.....	1906	1906
Royster, J. Dan, GP, Box 68, Elm St., Benson; Univ. of Md., 1936.....	1936	1942
Sox, Carl Caughman, GP, Box 66, Kenly; George Wash. Univ., 1932.....	1936	1936
Stanley, John Haywood, (Hon.), GP, Four Oaks; Univ. of N. C., 1904.....	1904	1906
Stockdale, Wayne H., S. 703 North Street, Smithfield; Univ. of Louisville, 1945.....	1952	1953
Upchurch, Thaddeus Gilbert, ObG, Upchurch Pharmacy Bldg.; Duke Univ., 1932.....	1932	1935
Wharton, Charles Watson, GP, 7-A Thornton Bldg., Smithfield; La. State Univ., 1937.....	1937	1937
Wilson, William Gilliam, (Hon.), GP, Box 296, Smithfield; Jefferson, 1921.....	1921	1924
Woodard, Barney Lelon, GP, Box 128, Kenly; Univ. of Md., 1933.....	1933	1935
Yates, Percy Fenton, GP, 221 S. Barbour Street, Clayton; Emory, 1935.....	1935	1938

JONES COUNTY SOCIETY⁴²

Bell, J. C., (Hon.), GP, 614 Main St., Maysville; Coll. of P. & S., Baltimore, 1910.....	1915	1922
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LEE COUNTY SOCIETY⁴³

OFFICERS—President: Byerly, J. H., (Biog. below), Sanford Secretary: Oelrich, A. M., (Biog. below), Sanford		
Blue, John F., GP, Box 890, 223 Carthage St., Sanford; Geo. Wash. Med. Sch., 1951.....	1952	1953
Blue, Waylon, GP, 410 E. Main Street, Sanford; Med. Coll. of Va., 1925.....	1925	1926
Byerly, James Hampton, GP, 140 N. Steele St., Box 247, Sanford; Northwestern Univ., 1935.....	1936	1938
Covington, M. Cade, GP, 112 E. Main Street, Sanford; Med. Coll. of Va., 1950.....	1950	1951
Dotterer, Elizabeth James, G, 118 Hawkins Avenue, Sanford; Univ. of Penn., 1939.....	1939	1944
Dotterer, John Emanuel, GP, P. O. Box 1051, 118 Hawkins Ave., Sanford; Univ. of Penn., 1938.....	1946	1946
Foster, John Franklin, (Hon.), GP, 153 Steele St., Sanford; N. C. Med. Coll., 1916.....	1916	1919
Hartness, William Rufus, GP, 207 E. Main St., Sanford; Univ. of Louisville, 1938.....	1938	1939
James, Arthur Augustus, Jr., I, 109 South Steele St., Sanford; Univ. of Penn., 1932.....	1932	1936
Knight, Floyd LaFayette, S. 103 Hillcrest Drive, Sanford; Univ. of Va., 1924.....	1925	1926
Lutterloh, I. Hayden, Jr., GP, Sanford; Jefferson Med. Coll., 1952.....	1952	1953
Lutterloh, Isaac Hayden, (Hon.), GP, Sanford; Jefferson, 1921.....	1921	1924
McIver, Lynn, (Hon.), GP, Box 277, Sanford; Kentucky Univ., 1901.....	1902	1902
McLeod, Mary Margaret, Pd. 114 S. Gulf Street, Sanford; Vanderbilt, 1935.....	1935	1946
Oelrich, August M., S. 103 Hillcrest Drive, Sanford; Univ. of Iowa, 1939.....	1947	1948
Patterson, Joseph Halford, GP, Box 506, Broadway; Med. Coll. of Va., 1932.....	1932	1934
Sowers, Roy Gerodd, (Hon.), OALR, Box 333, Sanford; Univ. of Md., 1923.....	1923	1924

LENOIR COUNTY SOCIETY⁴⁴

OFFICERS—President: Dalton, H. M., (Biog. below), Kinston Secretary: Postlethwait, R. W., (Biog. below), Kinston		
Arnold, Jesse H., Pd. Kinston Clinic, Kinston; Univ. of Md., 1946.....	1947	1950
Bower, Joseph S., I, Box 12, Pink Hill; Univ. of Va., 1943.....	1950	1951
Cranz, Oscar William, S. Kinston Clinic, Kinston; Med. Coll. of Va., 1931.....	1934	1936
Dale, Frederick Payne, S. #1 Old South Apt., McLewean St., Kinston; Temple Univ., 1946.....	1947	1953
Dalton, Horace Milton, Oph. Kinston Clinic, Kinston; Univ. of Va., 1939.....	1948	1948
Davis, Rachel Darden, G, 111 E. Gordon St., Kinston; Woman's Coll. of Penn., 1932.....	1933	1934
Dawson, James N., GP, P.O. Box 626, La Grange; Med. Coll. of Va., 1932.....	1932	1932
Dunning, Preston M., Ind. Du Pont Plant, Kinston; Temple, 1943.....	1952	1952
Fuller, Henry Fleming, ObG, Kinston Clinic, Kinston; Univ. of Penn., 1936.....	1936	1939
Huckeriede, Mark H., Ind. E. I. DuPont de Nemours, Inc., Kinston; Indiana, 1949.....	1954	1954
Jones, Ransom J., PH, 118 W. Queen Street, Kinston; Emory, 1932.....	1946	1947

ROSTER OF FELLOWS

85

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Keiter, William Eugene, Pd, 400 Glenwood Ave., Kinston; Wash. Univ., 1931.....	1935	1935
Lee, Mike, GP, 108 E. Caswell Street, Kinston; Tulane, 1926.....	1926	1927
Lokey, Julian L., Caswell Training School, Kinston; Univ. of Ga., 1943.....	1954	1954
Moseley, Zebulon Vance, (Hon.), GP, 204 E. Gordon St., Kinston; Univ. Coll. of Med., Richmond, 1913.....	1913	1914
Nisbet, Douglas Heath, (Hon.), GE, Retired, 903 West Road, Kinston; Harvard, 1917	1917	1920
Offutt, Vernon Delmas, I & C, Kinston Clinic, Kinston; Med. Coll. of Va., 1933.....	1935	1940
Parker, Samuel L., ObG, Kinston Clinic, Kinston; George Wash. Univ., 1942.....	1942	1950
Parrott, John A., S, Kenansville; Temple, 1940.....	1940	1942
Parrott, William Thomas, Jr., I, 109 E. Gordon St., Kinston; Johns Hopkins, 1943.....	1943	1949
Patrick, Simmons Isler, R, 300 Rhodes Avenue, Kinston; Duke, 1950.....	1951	1955
Peele, James Clarendon, ALR, Kinston Clinic, Kinston; Temple, 1937.....	1937	1942
Peery, Vance Price, (Hon.), OALR, (Retired), Kinston; Med. Coll. of Va., 1916.....	1917	1917
Postlethwait, Raymond Woodrow, S, Parrott's Hospital, Kinston; Duke, 1941.....	1947	1948
Pritchard, George Littleton, (Retired), Black Mountain; Univ. Coll. of Med., 1913.....	1913	1926
Pully, Rose, GP, North College St., Kinston; Univ. of Penn., 1951.....	1951	1954
Ruffin, David Winston, OALR, Pink Hill; Med. Coll. of Va., 1932.....	1932	1932
Sabiston, Frank, OALR, 115 East Gordon Street, Kinston; Univ. of Md., 1918.....	1919	1926
Temple, Rufus Henry, I, 306 N. Queen Street, Kinston; Univ. of Penn., 1936.....	1936	1938
Turrentine, Kilby Pairo, I, 400 Glenwood Ave., Kinston; Rush Med. Coll., 1931.....	1932	1933
Tyndall, Robert Glenn, S, Parrott Hospital, Kinston; Univ. of Penn., 1928.....	1928	1931
West, Bryan Clinton, GP, 113 E. Gordon Street, Kinston; Univ. of Penn., 1924.....	1924	1926
West, Clifton Forrest, (Hon.), I, 107 E. North St., Kinston; Univ. of Penn., 1917.....	1917	1920
Whitaker, Paul Frederick, (Hon.), I, 1205 N. Queen St., Kinston; Med. Coll. of Va., 1922	1922	1924
Williams, Lynwood Earl, GP, Kinston Clinic, Kinston; Univ. of Penn., 1940.....	1940	1943
Wooten, Cecil William, Jr., GP, Kinston Clinic, Kinston; Harvard, 1945.....	1945	1948

LINCOLN COUNTY SOCIETY⁴⁵

OFFICERS—President: Fitzgerald, J. H. Jr., (Biog. below), Lincolnton		
Secretary: Morton, L. T., (Biog. below), Lincolnton		
Cornwell, Abner Milton, S, S. Aspin Street, Lincolnton; George Wash. Univ., 1927.....	1927	1928
Costner, Walter Vance, Pd, P.O. Box 408, Lincolnton; Jefferson, 1924.....	1925	1927
Crowell, Lester Avant, Jr., I & R, Gordon Crowell Mem. Hosp., Lincolnton; Tulane, 1930	1930	1930
Edwards, Forest D., (Hon.), Ob, Route 3, Lawndale; Atlanta Med. Coll., 1914.....	1916	1919
Fitzgerald, John Hill, Jr., Pd, Crowell Hosp., Lincolnton; Univ. of Va., 1938.....	1940	1941
Gamble, John R., Jr., GP & S, Box 165, Lincolnton; Univ. of Md., 1946.....	1946	1946
Griggs, Boyce Powell, GP, Craig Bldg., Lincolnton; Bowman Gray, 1943.....	1943	1946
Jacobs, William Picard, (Hon.), PH (Retired), Carolina Inn, Chapel Hill; Univ. of Penn., 1911.....	1911	1913
Mankin, James Wallace, I, 3010 Country Club Rd., Winston-Salem; Wake Forest, 1946	1947	1955
Morton, L. Thomas, OALR, Crowell Hosp., Lincolnton; Univ. of Penn., 1927.....	1927	1947
Reinhardt, James Franklin, I, Crowell Hospital, Lincolnton; Duke, 1941.....	1946	1946
Wilson, Samuel Allen, S, 410 S. Aspin Street, Lincolnton; Emory, 1937.....	1937	1940

MACON-CLAY COUNTIES SOCIETY⁴⁶

OFFICERS—President: Fisher, Ernest W., (Biog. below), Franklin		
Secretary: Angel, Furman, (Biog. below), Franklin		
Angel, Edgar, S, Angel Hospital, Franklin; Jefferson, 1928.....	1932	1932
Angel, Furman, (Hon.), S, Angel Clinic, Franklin; Jefferson, 1918.....	1923	1924
Bittle, Charles R., GP, P. O. Box 292, Highlands; Bowman Gray, 1952.....	1952	1953
Fisher, Ernest Woodrow, GP, P.O. Box 290, Franklin; Med. Coll. of S. C., 1941.....	1941	1947
Hemphill, Clyde Hoke, (Hon.), I, 1401 N. 21st Pl., Phoenix, Ariz.; Univ. of Md., 1913.....	1913	1916
Horsley, Howard Theodore, GP, Box 521, Franklin; Baltimore Med. Coll., 1907.....	1915	1918
Kahn, Amelia Bauer, P, Franklin; Univ. of Minn., 1943.....	1949	1950
Kahn, Joseph William, GP, Angel Hospital, Franklin; Univ. of Cinn., 1942.....	1942	1946
Killian, Frank McClure, OALR, Box 435, Franklin; Univ. of Louisville, 1929.....	1929	1930

MADISON COUNTY SOCIETY⁴⁷

OFFICERS—President: Duck, W. O., (Biog. below), Mars Hill		
Secretary: McElroy, J. L., (Biog. below), Marshall		
Bradley, J. C., OALR, (also see Buncombe Co.) Box 327, Weaverville; Geo. Wash. Univ., 1915.....	1917	1948
Chandler, Weldon P., GP, (also see Buncombe Co.), Box 386, Weaverville; Univ. of Maryland Med. Coll., 1940.....	1940	1946
Ditmore, Harry Boaz, GP, Box T, Marshall; Univ. of Penn., 1925.....	1925	1933
Duck, Walter Otis, GP, P.O. Box 387, Mars Hill; Hahnemann Med. Coll., 1943.....	1943	1946
McElroy, James Lawrence, GP, Box AA, Marshall; George Wash. Univ., 1930.....	1930	1932
Powell, William Ernest, Jr., GP, Mars Hill; Duke, 1950.....	1950	1952
Robinson, Whitfield Locke, GP, Box 325, Mars Hill; Med. Coll. of Va., 1929.....	1929	1945
Sams, William Albert, (Hon.), GP, Box BB, Main St., Marshall; Lincoln Memorial, 1911	1919	1920
Sprinkle, Lawrence Tilson, GP, (also see Buncombe Co.), Box 218, Weaverville; Jefferson, 1945.....	1945	1948
Vance, Shelby William, GP, Marshall; Emory, 1934.....	1934	1947

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
MARTIN-WASHINGTON-TYRRELL COUNTIES SOCIETY⁴⁸		
OFFICERS—President: Ward, Walter, (Biog. below), Robersonville		
Secretary: Ward, Joseph, (Biog. below), Robersonville		
Bray, Thomas Latham, (Hon.), GP, Box 576, Plymouth; Univ. of Md., 1916.....	1916	1919
Brown, Victor Emanuel, GP & S, Brown Community Hospital, Williamston; Syracuse Univ., 1935.....	1936	1937
Furgurson, Ernest Whitmal, GP, Plymouth Clinic, Plymouth; Syracuse Univ., 1936.....	1937	1938
Harris, Charles I., Jr., GP, Martin General Hosp., Williamston; Univ. of Md., 1939.....	1939	1946
Highsmith, William Jesse, Jr., GP, Box 166, Hamilton; Bowman Gray, 1950.....	1950	1952
Himmelwright, Gabel G., S, Williamston Clinic, Williamston; Med. Coll. of Va., 1937.....	1940	1947
Llewellyn, John Thomas, GP, Williamston Clinic, Williamston; Med. Coll. of Va., 1937.....	1939	1941
McGowan, Claudius, (Hon.), GP, Box R, Plymouth; Med. Coll. of Va., 1917.....	1917	1922
Merritt, F. L., Columbia; Yale, 1951.....	1953	1954
Papineau, Alban, GP, Plymouth Clinic, Plymouth; Univ. of Penn., 1931.....	1933	1934
Phelps, John Mahlon, GP, Creswell; Jefferson, 1932.....	1932	1935
Rhodes, James Slade, Jr., GP, Martin Gen. Hosp., Williamston; Med. Coll. of Va., 1941.....	1941	1946
Ward, Joseph Major, GP, Main St., Box 182, Robersonville; Duke, 1947.....	1949	1950
Ward, Vernon Albert, (Hon.), GP, Box 182, Robersonville; Jefferson, 1908.....	1908	1914
Ward, Walter Elliott, GP, The Ward Clinic, Robersonville; Med. Coll. of Va., 1940.....	1940	1942
McDOWELL COUNTY SOCIETY⁴⁹		
OFFICERS—President: Hagna, L. William, (Biog. below), Marion		
Secretary: Drummond, C. Max, (Biog. below), Marion		
Allen, John O., GP, Corner of Main & R.R. Sts., Marion; Bowman Gray, 1951.....	1951	1953
Dobias, Stephen G., GP, Box 138, Old Fort; Med. Coll. Evang., 1938.....	1950	1951
Drummond, Charles Max, GP, Box 493, 9½ W. Henderson St., Marion; Bowman Gray, 1952.....	1952	1954
Erbele, Leo Albert, Hosp. Res., Dept. of Path., Bowman Gray, Winston-Salem; Bowman Gray, 1952.....	1952	1954
Hagna, Lewis William, GP, 10 Logan Street, Marion; Univ. of Penn., 1936.....	1938	1940
Johnson, John Brown, (Hon.), S, Old Fort; Univ. of Louisville, 1905.....	1914	1914
McBee, Paul Thomas, S, 9½ West Henderson St., Marion; Med. Coll. of Va., 1930.....	1930	1933
McIntosh, Archibald Nock, GP, 219 S. Main St., Marion; Duke, 1944.....	1948	1948
Miller, Lloyd Davis, GP, Tainter Bldg., Marion; Med. Coll. of Va., 1939.....	1947	1947
Ragaz, Florian J., GP, 31 W. Henderson St., Marion; Univ. of Wisc., 1949.....	1950	1954
Rowe, George C., GP, 10 S. Logan Street, Marion; Univ. of Penn., 1939.....	1939	1944
†Rowe, Virginia Copeland, Anes & PH, 10 S. Logan St., Marion; Tulane Univ., 1939.....	1939	1942
MECKLENBURG COUNTY SOCIETY⁵⁰		
OFFICERS—President: Faison, Elias S., (Biog. below), Charlotte		
Secretary: Dunning, Everette J., (Biog. below), Charlotte		
Adams, Carlisle, Pd, 231 N. Torrence St., Charlotte; Harvard, 1947.....	1954	1954
Adams, James Robert, Pd, 412 N. Church Street, Charlotte; Univ. of Va., 1928.....	1932	1933
Alexander, James Moses, I, 1361 E. Morehead St., Charlotte; McGill Univ., 1934.....	1934	1937
†Alexander, James Ramsey, (Hon.), Ob, 1030 Arrosa Ave., Charlotte; Univ. of Md., 1894.....	1894	1899
Armstrong, Beverly Weller, ALR, 106 W. Seventh St., Charlotte; Syracuse, 1941.....	1948	1949
Ashe, John Rainey, (Hon.), Pd, 1505 Elizabeth Ave., Charlotte; Columbia Univ., 1911.....	1915	1915
Ashe, John Rainey, Jr., ObG, 1524 Elizabeth Avenue, Charlotte; Duke, 1948.....	1950	1955
Aushman, Howard M., Anes, 200 Hawthorne Drive, Charlotte; Coll. of Med. Evang., 1936.....	1953	1953
Austin, DeWitt Ray, (Hon.), I, 809 Independence Blvd., Charlotte; Jefferson, 1917.....	1917	1919
Austin, Frederick Da Costa, Jr., I, 1012 Kings Dr., Charlotte 7; Vanderbilt, 1937.....	1937	1939
Baird, Harry Haynes, U, 1012 Kings Drive, Charlotte; Washington Univ., 1942.....	1942	1944
Baker, Thos. Williams, I, 305 Prof. Bldg., Charlotte 2; Univ. of Penn., 1931.....	1931	1938
Barnes, Margaret A., Pd, 930 East Blvd., Charlotte; Univ. of Va., 1943.....	1943	1945
Baxter, Oscar Dixon, R, 1012 Kings Drive, Charlotte; Jefferson Med. Coll., 1924.....	1924	1929
Bell, Ralph Monroe, I, 1012 Kings Drive, Charlotte; Jefferson, 1941.....	1941	1949
Bellows, Rowland Thompson, NS, 1012 Kings Dr., Charlotte; Cornell, 1930.....	1940	1941
Berkeley, Alfred Rives, Jr., Or, 412 N. Church St., Charlotte 2; Univ. of Va., 1942.....	1949	1950
Berkeley, William Thomas, Jr., Pl, 1012 Kings Drive, Charlotte; Georgetown Univ., 1943.....	1950	1951
Bethel, Millard Baimbridge, PH, 615 East Fourth St., Charlotte; Univ. of Tenn., 1936.....	1938	1939
Bigham, Roy Stinson, Jr., I, 412 N. Church St., Charlotte 2; Univ. of Va., 1941.....	1941	1946
Black, George William, (Hon.), GP, 1516 Harding Place, Charlotte; Med. Coll. of Va., 1924.....	1924	1925
Blanchard, George C., NS, 1012 Kings Drive, Charlotte; Cornell Med. Coll., 1942.....	1954	1954
Bost, Thomas Creasy, (Hon.), S, 810 Professional Bldg., Charlotte; George Washington University, 1915.....	1920	1921
Brabson, John Anderson, S, 1627½ Elizabeth Ave., Charlotte; Harvard Med. Sch., 1939.....	1943	1944
Bradford, Wallace Brown, ObG, 1509 Elizabeth Ave., Charlotte 4; Univ. of Penn., 1932.....	1932	1937
Bradford, Williamson Ziegler, ObG, 1509 Elizabeth Ave., Charlotte; Univ. of Penn., 1928.....	1928	1930
Brenizer, Addison Gorgas, (Hon.), S, 1012 Kings Dr., Charlotte; Johns Hopkins, 1908.....	1911	1911
Brenizer, Addison G., Jr., S, 1012 Kings Drive, Charlotte; Harvard, 1940.....	1948	1948
Brittian, Lowell E., GP, Box 275, Huntersville; Univ. of Md., 1952.....	1952	1954

†Deceased.

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Brooks, William Lester, Jr., I, 211 Hawthorne Lane, Charlotte; Duke, 1947.....	1948	1955
Brown, Charles William, ObG, 1521 Elizabeth Ave., Charlotte; Georgetown Univ., 1941	1941	1946
Bunch, Charles, S. U. S. Naval Recruiting Office, Fed. Bldg., Raleigh; Med. Coll. of the State of S. C., 1931.....	1931	1935
Burns, Stanley Sherman, OALR, 106 W. Seventh Street, Charlotte; Harvard, 1948.....	1954	1955
Byrnes, Thomas Henderson, Path, 612 Prof. Bldg., Charlotte; Med. Coll. of S. C., 1926	1932	1932
Carr, Chalmers R., Or, 123 West 7th St., Charlotte; Jefferson Med. Coll., 1936.....	1936	1954
Cates, Banks Raleigh, Jr., I, 1012 Kings Drive, Charlotte; Duke, 1944.....	1949	1950
Choate, Allyn Blythe, I, 1012 Kings Drive, Charlotte; Med. Coll. of Va., 1929.....	1929	1933
Citron, David Sanford, I, 1012 Kings Drive, Charlotte; Washington Univ., 1944.....	1952	1953
Clarke, James S., Pd, 412 N. Church Street, Charlotte; Bowman Gray, 1946.....	1946	1953
Cochrane, Fred Richard, Pd, 1361 East Morehead St., Charlotte 3; Jefferson, 1942.....	1942	1946
Coffee, Archie T., Jr., N, 1012 Kings Drive, Charlotte; Emory Univ., 1944.....	1951	1952
Cook, Paul H., GP, 2400 Wilkinson Boulevard, Charlotte; Duke, 1951.....	1953	1953
Coppedge, Thomas Oliver, Jr., R, 1012 Kings Dr., Charlotte; Bowman Gray, 1947.....	1947	1951
Cornell, William Sessions, S, Military Service, Charlotte; Emory Univ., 1931.....	1938	1938
Crowell, James Allen, ObG, 412 North Church St., Charlotte; La. State Univ., 1939.....	1946	1946
Culbreth, George Gordon, NS, 207 Hawthorne Lane, Charlotte; Duke, 1943.....	1944	1954
Curry, Clayton S., ObG, 1309 Plaza, Charlotte; Univ. of Tenn., 1944.....	1946	1950
Daniel, Walter Eugene, U, 1012 Kings Drive, Charlotte; Med. Coll. of Va., 1931.....	1938	1938
DeCamp, Allen Ledyard, ObG, 1505 Elizabeth Avenue, Charlotte; Univ. of Penn., 1934	1937	1938
Diggs, Andrew Monroe, Huntersville; Univ. of Md., 1952.....	1952	1955
Donner, Paul G., PN, 306 Med. Arts Bldg., Charlotte 2; Indiana Univ., 1945.....	1953	1954
Dorenbusch, Alfred A., ALR, 106 West Seventh St., Charlotte; Univ. of Louisville, 1940	1946	1946
Douglas, John Munroe, C & I, 1012 Kings Drive, Charlotte; Duke, 1939.....	1949	1950
Downs, Kenneth R., GP, 3213 N. Caldwell St., Charlotte; Louisville, 1952.....	1953	1954
Dunning, Everett Jackson, S, 1012 Kings Drive, Charlotte; Univ. of Penn., 1943.....	1950	1950
Edgerton, Glenn Souders, ObG, 1012 Kings Dr., Charlotte; Temple Univ., 1932.....	1932	1934
Elliott, Joseph Alexander, (Hon.), D, 1012 Kings Dr., Charlotte; Univ. of Mich., 1914	1919	1920
Elliott, Joseph Alexander, Jr., D, 1012 Kings Dr., Charlotte; Univ. of Mich., 1944.....	1944	1945
Faison, Elias Samson, I, 1012 Kings Drive, Charlotte; Emory Univ., 1929.....	1929	1933
Faison, Yates Wellington, (Hon.), Pd, 1018 Queens Rd., Charlotte 4; Harvard, 1910.....	1910	1911
Ferguson, Robert Thrift, (Hon.), G, 237 Middleton Dr., Charlotte; Univ. of Richmond, 1906.....	1909	1922
Fisher, Marshall L., P, 1618 Elizabeth Ave., Charlotte; Univ. of Ill., 1934.....	1951	1952
Fleming, Lawrence Edwin, S, 1531 Elizabeth Ave., Charlotte; Univ. of Penn., 1931.....	1931	1934
Foster, Clarence B., Oph, 219 Travis Ave., Charlotte 2; Univ. of Vt., 1932.....	1945	1946
Franklin, Ernest Washington, ObG, 1324 Scott Ave., Charlotte; Univ. of Penn., 1930.....	1930	1932
Gage, Lucius Gaston, (Hon.), I, 412 N. Church St., Charlotte 2; Univ. of Va., 1915.....	1921	1922
Gage, Lucius G., Jr., A, 412 N. Church Street, Charlotte; Duke, 1952.....	1952	1953
Gallant, Robert Miller, (Hon.), GP, 824½ E. Trade St., Charlotte; N. C. Med. Coll., 1915.....	1915	1916
Garrison, Robert Lee, S, 1508 E. 4th St., Charlotte; Bowman Gray, 1944.....	1944	1953
Gaul, John Stuart, (Hon.), Or, 315 Prof. Bldg., Charlotte; Medico-Chir. Coll. of Phila., 1913.....	1922	1923
Gaul, John Stuart, Jr., Or, Professional Bldg., Charlotte; Temple, 1946.....	1946	1953
Gay, Charles Houston, Pd, 1012 Kings Drive, Charlotte; Duke, 1933.....	1936	1938
Ghent, Thomas D., Oph, 110 N. Torrence St., Charlotte; Med. Coll. of S. C., 1944.....	1951	1953
Gibbon, James Wilson, (Hon.), S, 403 N. Tryon St., Charlotte; Jefferson, 1918.....	1920	1921
Gilmour, Monroe Taylor, I & C, 1351 Durwood Drive, Charlotte; Harvard, 1936.....	1940	1941
Glasgow, Douglas McKay, I, 1012 Kings Drive, Charlotte; McGill Univ., 1943.....	1950	1951
Glenn, John C., Jr., R, 2000 E. Fifth Street, Charlotte 7; Duke, 1943.....	1947	1947
Gordon, John Simpson, ALR, 412 N. Church St., Charlotte 2; Univ. of Penn., 1941.....	1947	1947
Graham, Walter Raleigh, Oph, 1012 Kings Drive, Charlotte 2; Univ. of Md., 1940.....	1940	1950
Greenwood, James Brooks, Jr., GP, 5 E. Doctors Bldg., Charlotte; Univ. of Penn., 1944.....	1944	1947
Gunter, Arthur Rhett, I & GE, 1205 E. Morehead St., Charlotte; Emory Univ., 1944.....	1948	1948
Hall, James Brownlee, R, 237 Huntley Place, Charlotte; Univ. of Penn., 1933.....	1948	1948
Hall, William Hugh, Pd, 1505 Elizabeth Ave., Charlotte; Med. Coll. of S. C., 1943.....	1950	1950
Hamer, Jerome B., 1521 Elizabeth Avenue, Charlotte; Univ. of Ga., 1938.....	1938	1940
Hamer, William Alexander, Anes, Mercy Hosp., Charlotte; Univ. of Md., 1930.....	1930	1932
Hand, Edgar Hall, (Hon.), PH, Pineville; N. C. Med. Coll., 1907.....	1907	1913
Hardman, Edward Francis, ObG, 412 N. Church Street, Charlotte; Temnle, 1938.....	1947	1947
Harloe, John Pinckney, GP, 508 Professional Bldg., Charlotte; Univ. of Va., 1945.....	1948	1948
Hart, Verling Kersey, (Hon.), ALR, 106 West Seventh St., Charlotte 2; Univ. of Penn., 1921.....	1924	1925
Hawes, Cecil Jennings, U, 1333 Romany Road, Charlotte; Vanderbilt, 1942.....	1942	1949
Hawes, George Aubrey, U, 1333 Romany Road, Charlotte; Vanderbilt, 1933.....	1939	1939
Hemphill, James Eugene, R, 1420 E. Fifth St., Charlotte 4; Univ. of Va., 1937.....	1942	1942
Hilderman, W. C., S, 412 N. Church Street, Charlotte; Jefferson Univ., 1942.....	1948	1953
Hipp, Edward Reginald, (Hon.), S, 412 N. Church St., Charlotte; Univ. of Va., 1918.....	1920	1921
Hipp, Edward Reginald, Jr., S, Univ. of Va. Hosp., Charlottesville, Va.; Univ. of Va., 1947.....	1947	1947
Hodges, Horace Hayden, I & GE, 1351 Durwood Drive, Charlotte; Univ. of Penn., 1940	1940	1947
Holbrook, William Douglas, PN, 1111 E. Morehead St., Charlotte; Bowman Gray, 1946	1947	1950
Holden, Howard Thompson, OALR, 207 N. Torrence St., Charlotte 4; Univ. of Va., 1934	1945	1946

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Hollowell, Victor Boyce, S, 229 N. Torrence St., Charlotte; Harvard, 1946.....	1953	1955
Hope, Alex Chalmers, GP, 1057 E. Morehead St., Charlotte; Med. Coll. of S. C., 1937....	1945	1945
Hough, Mac Johnson, Oph, 1012 Kings Drive, Charlotte; Med. Coll. of Va., 1945.....	1952	1953
Houser, Oscar Julian, (Hon.), Oph, 219 Professional Bldg., Charlotte; N. C. Med. Coll., 1914.....	1914	1916
Hovis, Leighton Watson, (Hon.), OALR, 403 N. Tryon St., Charlotte; N. C. Med. Coll., 1904.....	1904	1906
Huey, Thomas W., Jr., ObG, 1012 Kings Drive, Charlotte; Univ. of Penn., 1942.....	1943	1950
Hunt, Jasper Stewart, Pd, 1523 Elizabeth Ave., Charlotte; Vanderbilt Univ., 1929.....	1932	1933
Ingram, William Braxton, MCUSMR, Lt., GP, V.S.-30, WAS, Norfolk, Va.; Univ. of Md., 1944.....	1947	1948
Jacobs, Julian Erich John, Or, 123 W. Seventh St., Charlotte; Univ. of Neb., 1935.....	1939	1940
James, Richard T., Jr., I, 217 Travis Ave., Charlotte; Univ. of Penn., 1943.....	1954	1954
Johnston, William Oliver, I, 1520 East Fourth St., Charlotte; Vanderbilt, 1936.....	1936	1940
Jones, Grace Germania, S, 1111 East Morehead Street, Charlotte; Woman's Med. Coll. of Penn., 1934.....	1942	1943
Jones, Logan Oliver, I, 1320 Scott Avenue, Charlotte 3; Harvard, 1943.....	1948	1949
Jones, Otis Hunter, ObG, 1012 Kings Drive, Charlotte; Columbia Univ., 1933.....	1933	1937
Justis, Homer R., U, 1012 Kings Drive, Charlotte; Univ. of Va., 1946.....	1951	1953
Kalevas, Harry John, GP, 217 Sedgefield Road, Charlotte; Duke, 1945.....	1951	1953
Keller, Guy Otis, S, 1012 Kings Drive, Charlotte; Univ. of Va., 1944.....	1955	1955
Kelly, Luther W., Jr., I, 412 N. Church St., Charlotte; Harvard, 1948.....	1954	1955
Kelly, Luther Wrenmore, I, 412 North Church St., Charlotte; Univ. of Va., 1924.....	1926	1927
Kennedy, John Pressly, (Hon.), S, 1012 Kings Dr., Charlotte 7; Jefferson, 1915.....	1915	1920
Kennedy, Leon Toland, I, 1340 Romany Rd., Charlotte; Jefferson, 1935.....	1937	1939
Kester, John M., Jr., S, 1012 Kings Dr., Charlotte; Med. Coll. of Va., 1943.....	1949	1950
Kidd, Ralph V., Jr., I, 1205 E. Morehead St., Charlotte; Tulane, 1947.....	1953	1955
Kimmelstiel, Paul, Path, Charlotte Mem. Hosp., Charlotte; Tuebingen, Germany, 1926.....	1940	1941
Kossove, Albert Anthony, I, 1530 Elizabeth Ave., Charlotte; Med. Coll. of Va., 1938.....	1940	1941
Kossove, Irene Levy, I, 1530 Elizabeth Avenue, Charlotte; Med. Coll. of Va., 1939.....	1940	1941
Kroh, Laird F., GP, 2201 McClintock Road, Charlotte; Univ. of Penn., 1912.....	1946	1949
Lafferty, John Ogden, R, 1012 Kings Drive, Charlotte 7; Univ. of Penn., 1942.....	1942	1944
Large, H. Lee, Jr., Path & CP, 200 Hawthorne Lane, Charlotte 4; Vanderbilt, 1942.....	1942	1950
Lawrence, Patricia Ann, ObG, 1340 Romany Rd., Charlotte; Univ. of Va., 1950.....	1954	1954
Lee, F. Wayne, Or, 1012 Kings Drive, Charlotte; Univ. of Maryland, 1943.....	1949	1950
Leinbach, Robert Frederic, (Hon.), I, 1012 Kings Dr., Charlotte; Univ. of Penn., 1907.....	1907	1910
Leonard, Ruth, Oph, 106 West Seventh St., Charlotte 2; Temple Univ., 1942.....	1942	1945
Link, M. Robert, ALR, 1012 Kings Drive, Charlotte; Univ. of Louisville, 1942.....	1950	1950
Lovell, William F., A, 207 Hawthorne Lane, Charlotte; Duke, 1945.....	1945	1952
Lubchenko, Nicholas E., (Hon.), GP, Harrisburg; N. C. Med. Coll., 1915.....	1915	1916
Lymberis, Marvin N., Oph, 106 West Seventh St., Charlotte; Tulane, 1941.....	1947	1948
MacDonald, J. Kingsley, ObG, 1524 Harding Place, Charlotte; McGill Univ., 1926.....	1946	1946
Martin, William Francis, (Hon.), S, 608 Professional Bldg., Charlotte; University of Maryland, 1920.....	1920	1923
Massey, Charles Caswell, (Hon.), Pr, 403 North Tryon St., Charlotte; Jefferson, 1923.....	1923	1925
Matthews, William Camp, I, 217 Travis Avenue, Charlotte; Univ. of Va., 1937.....	1939	1939
May, Harvey C., ObG, 1524 Elizabeth Avenue, Charlotte; Tulane, 1942.....	1950	1950
Mayer, Walter Brem, I, 412 North Church St., Charlotte; Univ. of Penn., 1930.....	1932	1933
McCarty, Ralph Leevess, S, 1515 Elizabeth St., Charlotte; Tulane Univ., 1942.....	1946	1947
McCoy, Joseph B., Jr., ObG, 1505 Elizabeth Avenue, Charlotte; Univ. of Penn., 1950.....	1950	1954
McCune, William W., ObG, 1505 Elizabeth Avenue, Charlotte; Univ. of Penn., 1943.....	1951	1952
McDonald, Angus Morris, U, Box 1048, Charlotte; Univ. of Penn., 1928.....	1935	1937
McElwee, Ross S., Jr., S, 1012 Kings Drive, Charlotte; Cornell, 1944.....	1952	1952
McKay, Clinton Hull, I, 1322 Scott Avenue, Charlotte; Univ. of Tenn., 1939.....	1947	1947
McKay, Hamilton Witherspoon, (Hon.), U, 1012 Kings Dr., Charlotte; Jefferson, 1910.....	1911	1913
McKay, Robert Witherspoon, U, 1012 Kings Drive, Charlotte; Johns Hopkins, 1923.....	1928	1928
McKnight, Roy Bowman, S, 403 North Tryon St., Charlotte; Univ. of Penn., 1920.....	1920	1928
McLaughlin, Calvin Sturgis, Jr., GP, USTVA Med. Center, John Sevier Steam Plant, Rogersville, Tenn.; Univ. of Tenn., 1935.....	1937	1937
McLean, E. Kenneth, Pd, 1361 East Morehead St., Charlotte; Univ. of Texas, 1919.....	1927	1928
McLeod, W. L., ObG, 1524 Elizabeth Ave., Charlotte; La. State Med. Coll., 1945.....	1952	1952
McManus, Hugh Forrest, GP, Box 115, Matthews; Emory University, 1913.....	1922	1949
Miller, Oscar Lee, (Hon.), Or, 123 W. Seventh St., Charlotte; Atlanta Coll. of P. & S., 1912.....	1921	1922
Miller, Robert P., S, 1425 Elizabeth Avenue, Charlotte; Duke, 1940.....	1942	1946
Mitchner, Calvin C., D, 207 Hawthorne Lane, Charlotte; Jefferson, 1949.....	1954	1954
Montgomery, John Christian, Anes, 1400 Scott Ave., Charlotte; Univ. of Penn., 1932.....	1935	1936
Moore, Robert Ashe, (Hon.), Pd, 1505 Elizabeth Avenue, Charlotte; Univ. of Penn., 1923.....	1924	1925
Motley, Fred Elliott, ALR, 106 West Seventh St., Charlotte; Univ. of Mich., 1922.....	1926	1927
Mundorf, George, P, 1111 E. Morehead St., Charlotte; Bowman Gray, 1946.....	1947	1953
Munroe, Colin A., I & GE, Duke Hosp., Durham; Duke, 1939.....	1941	1946
Munroe, Henry Stokes, Sr., (Hon.), S, 301 Professional Bldg., Charlotte; N. C. Med. Coll., 1902.....	1902	1904
Nance, Charles Lee, (Hon.), GP, 410 Professional Bldg., Charlotte; N. C. Med. Coll., 1919.....	1921	1922

ROSTER OF FELLOWS

89

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Naumoff, Philip, GP, 1012 Kings Drive, Charlotte; Duke University, 1937.....	1939	1939
Neal, Rutherford Douglas, S, 1012 Kings Dr., Charlotte; Med. Coll. of Va., 1942.....	1942	1948
Neblett, Herbert Clarence, Oph, 1012 Kings Dr., Charlotte; Med. Coll. of Va., 1914.....	1921	1929
Newell, Leon Burns, (Hon.), GP, 1006 Independence Building, Charlotte; Univ. of N. C., 1905.....	1905	1906
Newton, Howard Lowell, (Hon.), GP, 404 Professional Bldg., Charlotte; Northwestern, 1921.....	1923	1925
Norris, Charles Bradley, I, 1508 E. Fourth St., Charlotte; Georgetown Univ., 1941.....	1941	1947
Northington, James Montgomery, (Hon.), I, 2148 Malvern Road, Charlotte; Med. Coll. of Va., 1905.....	1909	1909
Nowlin, George Preston, U, 412 North Church St., Charlotte; Univ. of Va., 1924.....	1929	1930
Page, George Dantzler, S, 608 Prof. Bldg., Charlotte; Emory, 1942.....	1949	1950
Peeler, Clarence N., (Hon.), ALR, 106 West Seventh St., Charlotte; N. C. Med. Coll., 1906.....	1906	1908
Pennington, Glenn Walton, ALR, 1318 Scott Avenue, Charlotte; Univ. of Ga. Med. School, 1937.....	1946	1946
Perrin, Thomas S., I, 1361 E. Morehead St., Charlotte 3; Johns Hopkins, 1943.....	1952	1953
Petteway, George Henry, (Hon.), ObG, 1524 Elizabeth Ave., Charlotte; N. C. Medical College, 1913.....	1913	1914
Pettus, William Henry, Jr., S, 1012 Kings Dr., Charlotte; Cornell Med. Sch., 1937.....	1941	1942
Phillips, DeWitt Dewey, Jr., GP, 1034 Kenilworth Ave., Charlotte; Bowman Gray, 1946.....	1947	1948
Pitts, William Reid, NS, 1012 Kings Drive, Charlotte; Harvard, 1933.....	1939	1940
Pixley, Rowland T., ObG, Meyers Park Med. Bldg., Charlotte; Univ. of Buffalo, 1946.....	1952	1953
Potter, E. Lindsay, Jr., GP, 1112 Independence Bldg., Charlotte; Temple, 1939.....	1939	1946
Powers, John Alfred, Or, 1500 Elizabeth Ave., Charlotte 2; Univ. of Oregon, 1945.....	1948	1949
Pressly, Claude Lowry, S, 1012 Kings Drive, Charlotte; Univ. of Penn., 1943.....	1943	1950
Query, Richard Zimri, Jr., I, 1225 East Morehead St., Charlotte 3; Duke Univ., 1934.....	1937	1938
Raby, William Thomas, I, 101 Queens Road, Charlotte; Univ. of Md., 1942.....	1942	1943
Rankin, Watson Smith, (Hon.), Hosp. Ad, (Retired), 2049 Briarwood Rd., Charlotte; Univ. of Md., 1901.....	1901	1901
Ranson, John Lester, Jr., I, 1012 Kings Drive, Charlotte; Jefferson, 1942.....	1942	1943
Ranson, William A., I, 1718 25th Ave., San Francisco 22, Calif.; Jefferson, 1948.....	1948	1953
Rapp, Ira H., Or, 1500 Elizabeth Ave., Charlotte; Univ. of Penn., 1943.....	1943	1948
Reid, Calvin Graham, I, 1225 E. Morehead St. Charlotte; Univ. of Penn., 1935.....	1938	1939
Reid, Ralph Connor, S, Pineville Hosp., Box 178, Pineville; Columbia Univ., 1940.....	1942	1943
Robinson, Charles Wilson, GP, 403 N. Tryon St., Charlotte; Univ. of Penn., 1930.....	1930	1932
Ross, Otho Bescent, (Hon.), GP, 1012 Kings Drive, Charlotte; Univ. of Penn., 1909.....	1909	1912
Ross, Otho B., Jr., I, 1012 Kings Drive, Charlotte; Duke, 1943.....	1943	1950
Ross, Thomas Wallace, GP, 1912 Central Avenue, Charlotte; Jefferson, 1927.....	1927	1930
Rutledge, Mary Lou, Pd, 1901 E. Fifth Street, Charlotte; Temple Univ., 1948.....	1948	1951
Sanger, Paul Weldon, S, 1012 Kings Drive, Charlotte 7; Vanderbilt, 1931.....	1937	1938
Sears, Warren W., GP, 824½ E. Trade St., Charlotte; Bowman Gray, 1953.....	1953	1954
Seay, Hillis Ledbetter, T, Mecklenburg Sanatorium, Huntersville; Vanderbilt, 1930.....	1933	1934
Selby, William Elledge, GP, 121 West Seventh St., Charlotte; Temple Univ., 1934.....	1934	1936
Shaia, William Harry, GP, 2125 Berryhill Road, Charlotte; Med. Coll. of Va., 1945.....	1947	1948
Shull, Joseph Rush, (Hon.), R, 323 Professional Bldg., Charlotte; Univ. of Penn., 1910.....	1910	1913
Shull, William H., I, 1012 Kings Drive, Charlotte; Jefferson, 1944.....	1944	1946
Sloan, Henry Lee, Jr., Oph, 106 W. Seventh St., Charlotte; Univ. of Penn., 1947.....	1947	1954
Sloan, Henry Lee, Sr., (Hon.), Oph, 106 West Seventh St., Charlotte; Univ. of Penn., 1911.....	1913	1920
Sluder, Harold M., ObG, 1012 Kings Drive, Charlotte; Bowman Gray, 1945.....	1945	1952
Smeltzer, Dave H., GP, 3227 Tuckasegee Road, Charlotte; Duke, 1950.....	1952	1953
Smith, Franklin Calton, (Hon.), Oph, 106 West Seventh St., Charlotte; Jefferson, 1921.....	1921	1925
Smith, Stuart Cameron, D, 760 Lakeland Drive, Jackson, Miss.; Duke, 1947.....	1953	1953
Smith, Wilford M., GP, 2916 C. Selwyn Avenue, Charlotte; Med. Coll. of S. C., 1950.....	1955	1955
Snelling, J. McL., S, 810 Prof. Bldg., Charlotte; Univ. of Ga., 1943.....	1953	1954
Sparrow, Thomas DeLamar, (Hon.), S, 1012 Kings Dr., Charlotte; Univ. of Penn., 1920.....	1920	1923
Spaugh, Earle, Pd, 1524 Harding Place, Charlotte; Univ. of Va., 1950.....	1950	1955
Spencer, Benjamin Decatur, GP, 300 East Boulevard, Charlotte 3; McGill Univ., 1943.....	1947	1947
Squires, Claude Babbington, (Hon.), U, 403 North Tryon St., Charlotte; Jefferson Medical College, 1919.....	1919	1921
Steiger, Howard P., D, 207 Hawthorne Lane, Charlotte; Duke, 1939.....	1947	1947
Sternbergh, Waldemar C., R, Charlotte Mem. Hosp., Charlotte; Univ. of Vermont, 1933.....	1948	1948
Stewart, William Sinclair, IV, Or, 1012 Kings Drive, Charlotte; Duke, 1945.....	1947	1948
Stratton, James David, Oph, 1012 Kings Drive, Charlotte 7; Rush, 1937.....	1946	1947
Stuckey, Charles LeGrand, I, 1515 Elizabeth Avenue, Charlotte; Univ. of Va., 1940.....	1946	1947
Summerville, Walter Monroe, Path, 612 Professional Bldg., Charlotte; Emory Univ., 1936.....	1936	1937
Sweeney, Edgar Chew, Pd, 1425 Elizabeth Ave., Charlotte; Jefferson Med. Coll., 1949.....	1949	1954
Taylor, Andrew DuVal, A, 1012 Kings Drive, Charlotte; Univ. of Md., 1934.....	1934	1937
Taylor, Fredrick H., S, 1012 Kings Drive, Charlotte; Duke, 1945.....	1945	1954
Thompson, Silas Raymond, (Hon.), U, 240 Cherokee Road, Charlotte; N. C. Med. Coll., 1914.....	1914	1915
Tillett, Charles W., Oph, 1511 Scott Avenue, Charlotte; Johns Hopkins, 1946.....	1946	1955
Tillett, Grace M., R, 1511 Scott Avenue, Charlotte; Syracuse, 1949.....	1954	1955
Todd, Lester Claire, (Hon.), A, 1012 Kings Drive, Charlotte; Univ. of Mich., 1918.....	1920	1920

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Townsend, Maurice Lyndon, (Hon.), P. Society Hill, S. C.; Indiana Med. Coll., 1906.....	1912	1913
Tuggle, Allan Davis, R. 2335 Forrest Drive, Charlotte; Univ. of Louisville, 1936.....	1940	1941
Van Hoy, Joe Milton, S. 1012 Kings Drive, Charlotte; Duke, 1938.....	1938	1949
Venning, William Lucas, Jr., Pd, 1901 East Fifth St., Charlotte; Duke, 1939.....	1943	1944
Verdone, George F., I, 1012 Kings Drive, Charlotte; N. Y. Med. Coll., Flower & Fifth Ave. Hosp., 1943.....	1949	1949
Verner, Hugh David, I, 1361 East Morehead Street, Charlotte; Johns Hopkins, 1943.....	1947	1950
Walker, T. E., Pd, 1529 Elizabeth Avenue, Charlotte; Harvard, 1950.....	1950	1953
Wannamaker, Edward Jones, Jr., (Hon.), I, Retired, RFD 3, Box 250, Charlotte 7; Univ. of Penn., 1921.....	1924	1925
Watkins, Carlton Gunter, Pd, 901 E. Fifth St., Charlotte; Washington Univ., 1943.....	1943	1946
Welton, David Goe, D. 403 N. Tryon St., Charlotte; Univ. of Wisc., 1935.....	1939	1939
Wheeler, Raymond Milner, I, 1320 Scott Ave., Charlotte; Washington Univ., 1943.....	1943	1948
Whisnant, Albert Miller, (Hon.), OALR, Park Road, Route 2, Charlotte; College of P. & S., Baltimore, 1893.....	1893	1899
White, Thomas Preston, (Hon.), I, 211 Hawthorne Lane, Charlotte; Univ. of Penn., 1922.....	1924	1925
White, William Elliott, Pd, 1012 Kings Drive, Charlotte; Bowman Gray, 1946.....	1947	1953
Whitesides, William C., Jr., I, 1515 Elizabeth Ave., Charlotte; Duke, 1944.....	1952	1952
Williams, McChord, S. 211 Hawthorne Lane, Charlotte; Harvard, 1937.....	1937	1942
Wilson, Franklin LeRoy, GP, 1700 Mecklenburg Ave., Charlotte; Middlesex Coll., 1936.....	1950	1951
Winkler, Harry, Or, 1500 Elizabeth Ave., Charlotte; Rush Medical College, 1929.....	1931	1931
Wise, Fred E., Jr., R. 412 N. Church St., Charlotte; Med. Coll. of Va., 1945.....	1954	1955
Woltz, John Henry Early, ObG, 1509 Elizabeth Ave., Charlotte; Univ. of Penn., 1942.....	1942	1946
Woods, James Baker, Jr., GP, Box 157, Davidson; Med. Coll. of Va., 1922.....	1942	1943
Wright, Thomas Hasel, Jr., P, 1012 Kings Drive, Charlotte; Univ. of Penn., 1936.....	1945	1946

MITCHELL-YANCEY COUNTIES SOCIETY⁵¹

OFFICERS—President: Horner, Jack C., (Biog. below), Spruce Pine Secretary: Graham, David E., (Biog. below), Spruce Pine		
Gouge, Arthur Edward, (Hon.), GP, Bakersville; Medical College of Virginia, 1917.....	1917	1920
Graham, David Eric, GP, Spruce Pine; Univ. of Maryland, 1952.....	1952	1954
Horner, Jack C., S. Williams Clinic, Spruce Pine; George Washington Univ., 1937.....	1951	1951
Ost, Walter M., GP, Higgins; College of Medical Evangelists, 1948.....	1949	1951
Peterson, Charles A., (Hon.), GP, 10 Hazel Ave., Spruce Pine; N. C. Med. Coll., 1907.....	1907	1908
Phillips, David Lawrence, GP, 110 East Oak Avenue, Spruce Pine; Bowman Gray, 1945.....	1945	1948
Sargent, Winston Arthur Young, S. Yancey Hosp., Inc., Burnsville; Univ. of Vt., 1930.....	1953	1954
Webb, Melvin Walter, GP, Webb Clinic, Burnsville; Bowman Gray, 1945.....	1948	1949

MONTGOMERY COUNTY SOCIETY⁵²

OFFICERS—President: Andrews, V. L., (Biog. below), Mt. Gilead Secretary: Rankin, P. R., Jr., (Biog. below), Mt. Gilead		
Andrews, George Alvin, OALR, Box 275, Mt. Gilead; Med. Coll. of Va., 1929.....	1930	1950
Andrews, Vernon L., GP, Box 407, Mt. Gilead; Columbia Univ., 1942.....	1942	1947
Bennett, Herron Kent, GP, 25 Bridges Loop, Apt. 58, MacDill AFB, Fla.; Bowman Gray, 1952.....	1952	1954
Bruton, Charles Wilson, GP, Box 27, Troy; Bowman Gray, 1945.....	1945	1950
Eckerson, Charles Neil, GP, Box 87, Troy; Med. Coll. of Va., 1935.....	1935	1937
Highsmith, Charles, S. Montgomery Mem. Hosp., Troy; George Wash. Univ., 1942.....	1942	1952
Koogler, Benjamin Robert, GP, Candor; Ohio State Medical College, 1938.....	1939	1941
Phelps, James Solomon, GP, P. O. Box 5, Troy; Univ. of Md., 1952.....	1952	1953
Rankin, Pressly Robinson, (Hon.), GP, Mt. Gilead; N. C. Med. Coll., 1910.....	1910	1912
Rankin, Pressly Robinson, Jr., GP, Box 205, Mt. Gilead; Bowman Gray, 1946.....	1948	1950
Scarborough, Charles Foster, GP, Box 318, Star; Jefferson, 1946.....	1947	1950

MOORE COUNTY SOCIETY⁵³

OFFICERS—President: Vanore, A. A., (Biog. below), Robbins Secretary: Peck, H. A., (Biog. below), Pinehurst		
Bowen, James Poore, S & GP, 117 W. Main St., Aberdeen; Univ. of Md., 1929.....	1932	1934
Brady, Charles Eldon, GP, Robbins; Univ. of Md., 1944.....	1945	1948
Chester, Pinkney Jones, (Hon.), OALR, W. Broad St., Southern Pines; N. C. Med. Coll., 1913.....	1913	1920
Caddell, H. Morris, GP, Aberdeen; Univ. of Ga., 1952.....	1953	1954
Dougherty, Raymond Joseph, GP, Box 436, Vass; Oklahoma Univ., 1947.....	1952	1955
Draper, Arthur J., I, Kaiser Clinic, San Francisco, Calif; Harvard, 1942.....	1945	1945
Felton, Robert Lee, Jr., GP, Box 176, Carthage; Univ. of Penn., 1927.....	1927	1930
Green, Philip P., P. 435 E. Indiana Ave., Southern Pines; St. Louis Univ., 1914.....	1914	1953
Grier, Charles Talmadge, (Hon.), GP, Box 475, Carthage; N. C. Med. Coll., 1910.....	1912	1913
Grier, John C., Jr., PN, Wellesley Building, Pinehurst; Jefferson, 1940.....	1940	1947
Heinitsh, George, OALR, 125 E. Pennsylvania Ave., Southern Pines; Duke, 1932.....	1932	1935
Hollister, William Fredwin, S. Moore County Hospital, Pinehurst; Duke, 1938.....	1940	1947
Jamison, Andrew Marshall, Jr., I, 510 N. W. Broad St., Southern Pines; Med. Coll. of S. C., 1937.....	1954	1955
Kemp, Malcolm Drake, P. Pinebluff Sanitarium, Pinebluff; Washington Univ., 1930.....	1930	1936
Langner, Fred W., I & P, Pinebluff Sanitarium, Pinebluff; Univ. of Penn., 1943.....	1951	1952
Marr, Myron Whitmore, (Hon.), I, Linden Rd., Pinehurst; Tufts Med. School, 1907.....	1909	1915

ROSTER OF FELLOWS

91

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
McDuffie, William Norman, (Hon.), GP, Robbins; Emory, 1916.....	1920	1921
McFarland, Irene McCain, GP, Route 1, Box 174, Columbia, S. C.; Univ. of Penn., 1948	1948	1949
McLeod, Vida Canada, GP, Box 775, Southern Pines; Baylor Univ., 1919.....	1931	1931
McMillan, Robert Monroe, I, S. W. Broad St., Southern Pines; Johns Hopkins, 1938....	1938	1946
Milliken, James Shepard, (Hon.), I, Box 55, Southern Pines; Jefferson, 1915.....	1915	1916
Monroe, Clement Rosenberg, S, Moore County Hosp., Pinehurst; Univ. of Md., 1924....	1925	1930
Mudgett, William Chase, (Hon.), I, P.O. Box 867, Southern Pines; Maryland Medical College, 1903.....	1908	1908
Nicol, William Frederick, GP, Box 637, Carthage; Univ. of Texas, 1952.....	1954	1954
Owens, Francis Leroy, ObG, Box 487, Linden Road, Pinehurst; Duke Univ., 1934.....	1935	1938
Peck, Harold A., R, Moore County Hosp., Pinehurst; Albany Med. Coll., 1916.....	1947	1947
Phillips, Charles A. Speas, U, 310 South Ashe Street, Southern Pines; Northwestern, 1947.....	1949	1954
Pishko, Michael I., ObG, Moore County Hosp., Pinehurst; Duke, 1936.....	1939	1945
†Rosser, Robert Guthrie, (Hon.), GP, Box 78, Vass; N. C. Med. Coll., 1909.....	1909	1911
Scheiber, Herman, Jr., 145 Hicks St., Brooklyn, New York; Western Res. Univ., 1950....	1954	1954
Street, Murdo Eugene, Jr., GP, Glendon; Duke University, 1937.....	1941	1942
Symington, John, GP, Seawell Building, Carthage; Univ. of Maryland, 1902.....	1927	1928
Tufts, Emily, Pd, Harvard Bldg., Pinehurst; Temple, 1950.....	1951	1954
Vanore, Andrew A., GP, Box 456, Robbins; Long Island Coll. of Med., 1937.....	1947	1948
Wilcox, Jesse Womble, (Hon.), PH, Health Dept., Carthage; Univ. of N. C., 1906.....	1906	1906

NASH—SEE EDGECOMBE—NASH

NEW HANOVER COUNTY SOCIETY⁵⁴

OFFICERS—President: Koseruba, G. M., (Biog. below), Wilmington Secretary: Moore, H. G., Jr., (Biog. below), Wilmington		
Anderson, Elbert Carl, Oph, 210 N. Front St., Wilmington; Northwestern University, 1937	1937	1939
Barefoot, Graham Ballard, (Hon.), R, 10th and Rankin Sts., Box 1198, Wilmington; Jefferson Med. Coll., 1923	1923	1924
Bear, Sigmond Aaron, ObG, 306 N. 11th Street, Wilmington; Johns Hopkins, 1948.....	1952	1952
Beard, Grover Cleveland, GP, Box 37, Atkinson; Univ. of Md., 1912.....	1912	1951
Bellamy, Robert Hartlee, (Hon.), GP, Rt. 3, Box 615, Wilmington; Jefferson, 1902.....	1902	1902
Black, Paul Adrian Lawrence, OALR, 419 Chestnut St., Wilmington; Coll. of Med. Evang., 1932.....	1935	1938
Brandon, James Robert, Or, 308 N. Third St., Wilmington; Med. Coll. of Va., 1942.....	1942	1947
Brouse, Ivan Edwin, R, P.O. Box 1198, Wilmington; McGill, 1922.....	1946	1947
Brown, Landis Gold, S, Southport; Northwestern Univ., 1934.....	1935	1938
Burdette, Fred McPherson, Jr., GP, Box 398, Southport; Med. Coll. of S. C., 1942.....	1947	1948
Cannon, William Maurice, Path, James Walker Mem. Hosp., Wilmington; Med. Coll. of S. C., 1939.....	1952	1952
Codington, Herbert Augustus, (Hon.), S & G, 507 Murchison Bldg., Wilmington; University of Maryland, 1911.....	1915	1917
Crouch, Auley McRae, (Hon.), Pd, 520 Dock St., Wilmington; Jefferson, 1916.....	1916	1918
Crouch, Auley McRae, Jr., Pd, 1002 Grace St., Wilmington; Jefferson, 1943.....	1943	1946
Crouch, Walter Lee, Pd, 10th and Grace St., Wilmington; Univ. of Md., 1946.....	1946	1952
Dees, John Tyler, GP, Burgaw; Duke, 1952.....	1952	1954
Dickie, James W., GP, 509 Princess Street, Wilmington; Univ. of Penn., 1942.....	1947	1947
Dosher, William Sterling, ObG, 306 N. 11th St., Wilmington; Med. Coll. of Va., 1930....	1930	1934
Evans, John E., S, 304 N. 11th Street, Wilmington; Univ. of Md., 1947.....	1947	1954
Fales, Robert Martin, S, 913 Murchison Bldg., Wilmington; Jefferson, 1932.....	1932	1936
Farthing, John Watts, S, 303 North Tenth Street, Wilmington; Univ. of Penn., 1933.....	1938	1939
Freeman, Jere David, (Hon.), OALR, 201 N. Front St., Wilmington; Med. Coll. of Va., 1918.....	1921	1922
Goodman, E. G., I & A, Leland; Duke, 1940.....	1940	1945
Graham, Charles Pattison, S, 304 N. 11th Street, Wilmington; Harvard, 1932.....	1932	1937
Grove, Raymond F., Oph, 905 Murchison Bldg., Wilmington; Northwestern Univ., 1939	1950	1951
Hall, Rowena Sidbury, Pd, 920 S. 17th St., Wilmington; Duke, 1938.....	1942	1951
Harriss, Andrew Howell, (Hon.), GP, Retired, 609 Dock St., Wilmington; Medico-Chirurgical Coll., Penn., 1893	1892	1894
Hoggard, John Thomas, (Hon.), GP, Retired, 504 Orange St., Wilmington; University of Medicine, Richmond, 1906.....	1906	1922
Hooper, Joseph Ward, Jr., U, 410 N. 11th St., Wilmington; Harvard, 1946.....	1946	1953
Hornstein, Norman M., GP, Southport; Univ. of London, 1941.....	1941	1949
Johnson, George W., (Hon.), ObG, 201 N. Front St., Wilmington; Univ. of Penn., 1920	1920	1921
Johnson, Heber W., GP, 121 S. 17th Street, Wilmington; Harvard, 1939.....	1947	1948
Knox, Joseph Clyde, Pd, 308 North 11th Street, Wilmington; Univ. of Md., 1924.....	1924	1932
Koonce, Donald Brock, S, 408 North 11th St., Wilmington; Univ. of Penn., 1929.....	1929	1934
Kozeruba, George Michael, Pd, 420 Orange St., Wilmington; Coll. of Med. Evang., 1939	1942	1944
MacKay, James Calvin, I, 201 N. Front St., Wilmington; Bowman Gray, 1947.....	1954	1954
McEachern, Duncan Roland, S, 203 Murchison Bldg., Wilmington; Med. Coll. of Va., 1932.....	1932	1935
Marshburn, Elisha Thomas, Jr., I, 201 N. Front St., Wilmington; Bowman Gray, 1947	1948	1954

†Deceased

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Mason, Lockert Bemiss, S, 1007 Murchison Bldg., Wilmington; Med. Coll. of Va., 1945	1945	1952
Mebane, William Carter, Jr., S, Bulluck Hosp. Clinic, Wilmington; Univ. of Md., 1931	1932	1934
Moore, Horace G., Jr., S, 1010 Grace St., Wilmington; Johns Hopkins, 1945	1953	1953
Murchison, David Reid, (Hon.), I, 17 N. Front St., Wilmington; Johns Hopkins, 1916	1922	1923
Pace, Samuel Eugene, GP, Bulluck Hospital Clinic, Wilmington; Jefferson, 1932	1932	1939
Peedin, James Harold, GP, Box 248, Burgaw; Duke, 1952	1952	1954
Phillips, William A., D, 120 S. Third St., Wilmington; Jefferson, 1947	1953	1953
Pickard, Henry Mack, I, 17 N. 17th Street, Wilmington; McGill, 1938	1946	1946
Pigford, Robert T., I, 1014 Murchison Bldg., Wilmington; Univ. of Md., 1940	1940	1947
Powell, Charles James, GP, 515 Murchison Bldg., Wilmington; Univ. of Tenn., 1943	1946	1947
Preston, Ellen Katherine J., Pd, P. O. Box 1678, Wilmington; Med. Coll. of Va., 1950	1952	1955
Reynolds, Frank Russell, Pd, 1613 Dock Street, Wilmington; Univ. of Penn., 1944	1944	1950
Robertson, James Farish, (Hon.), S, 325 Canal St., New Smyrna Beach, Fla.; Univ. of Penn., 1913	1913	1916
Sale, Charles Steven, ALR, 1010 Murchison Bldg., Wilmington; Univ. of Arkansas, 1944	1951	1952
Sidbury, James Buren, (Hon.), Pd, 15 N. Fifth St., Wilmington; Columbia Univ., 1912	1915	1916
Sinclair, Roby Thomas, Jr., GP, Bulluck Hospital Clinic, Wilmington; Georgetown University, 1938	1938	1940
Sloan, David Bryan, (Hon.), OALR, P.O. Box 277, Wilmington; Univ. of Penn., 1914	1914	1920
Swain, Wingate Elwood, GP, U. S. Naval Hosp. Dept. of Orth., Portsmouth, Va.; Duke, 1945	1945	1948
Taubenhaus, Leon Jair, PII, Apt. 3, 37 Englewood Ave., Brookline, Mass.; Tulane, 1937	1948	1948
Taylor, William Ivey, Jr., GP, Box 156, Burgaw; Jefferson, 1941	1941	1946
Thompson, George Richard Cunliffe, GP, 407 Murchison Bldg., Wilmington; Med. Coll. of S. C., 1939	1942	1943
Tidler, James, I, 306 N. 11th Street, Wilmington; Med. Coll. of Va., 1944	1949	1950
Velsor, Harry Van, D, 920 Grace St., Wilmington; Albany Med. Sch., 1947	1954	1954
Walden, Kennon Christian, S, ACL Gen. Office, Wilmington; Med. Coll. of Va., 1930	1943	1943
Walker, Elmer Pixley, ObG, Bulluck Hosp., Wilmington; Emory Univ., 1936	1936	1941
Warshauer, Samuel E., I, 301 N. Tenth St., Wilmington; Med. Coll. of Va., 1936	1936	1946
Wells, Edwin Julius, PI, 504 Murchison Bldg., Wilmington; Univ. of Penn., 1946	1946	1953
Wessell, John Charles, (Hon.), I, 1501 Market St., Wilmington; Univ. of Md., 1900	1900	1900
Williams, Ralph Bertram, Jr., S, 308 N. Third St., Wilmington; Vanderbilt, 1943	1949	1951
Williams, Robert W., S, 1007 Murchison Bldg., Wilmington; Cornell, 1945	1953	1953
Wolfe, Nathan Carl, GP, Burgaw; Vanderbilt, 1929	1930	1944

NORTHAMPTON COUNTY SOCIETY⁵⁵

OFFICERS—President: Outland, R. B., (Biog. below), Rich Square

Secretary: Parker, W. R., (Biog. below), Jackson

Fleetwood, Joseph Anderton, (Hon.), GP, Box 621, Conway; Tulane Univ., 1921	1921	1923
Outland, Robert Boone, GP, Rich Square; Univ. of Penn., 1932	1933	1936
Stephenson, Bennett Edward, GP, P.O. Box 206, Rich Square; Med. Coll. of Va., 1935	1935	1937

ONSLOW COUNTY SOCIETY⁵⁶

OFFICERS—President: Henderson, J. P., Jr., (Biog. below), Sneeds Ferry

Secretary: Gurganus, G. E., (Biog. below), Jacksonville

Barnes, M. Russell, Jr., OALR, New River Drive, Jacksonville; Temple Univ., 1937	1937	1955
Corbett, James Patrick, GP, Box 8, Swansboro; Washington Univ., 1928	1928	1930
Cox, Samuel Clements, GP, 337 New River Dr., Jacksonville; Med. Coll. of Va., 1935	1935	1937
Dixon, Philip L., Jr., GP, Mill Ave. & Coll. St., Jacksonville; Univ. of Md., 1942	1942	1946
Gurganus, George Elwood, OALR, New River Clinic, Jacksonville; Temple Univ., 1937	1937	1939
Henderson, John Percy, (Hon.), GP, 417 College St., Jacksonville; Med. Coll. of Va., 1918	1919	1921
Henderson, John P., Jr., GP, Sneeds Ferry; Bowman Gray, 1951	1951	1953
Mease, Willis Eugene, GP, Box 327, Richlands; Univ. of Nebraska, 1945	1948	1948
Piver, James D., S, 729 Court St., Jacksonville; Univ. of Penn., 1943	1944	1951
Turlington, William Troy, Jr., GP, Box 206, 21 New Bridge St., Jacksonville; Univ. of N. Y., 1929	1929	1930

ORANGE—SEE DURHAM—ORANGE

PAMLICO COUNTY SOCIETY⁵⁷

OFFICERS—President: Dees, D. A., (Biog. below), Bayboro

Secretary: Warren, J. B., (Biog. below), Oriental

Daniels, Oscar Carroll, Sr., (Hon.), OALR, Oriental; Med. Coll. of Va., 1903	1903	1903
Dees, Daniel Alfonso, (Hon.), OALR, Bayboro; Baltimore Med. Coll., 1903	1903	1905
McCotter, St. Elmo, (Hon.), GP, Bayboro; P. & S., Atlanta, Ga., 1908	1908	1909
Purdy, James Jarrett, (Hon.), GP, Box 526, Oriental; Med. Coll. of Va., 1900	1914	1915
Warren, Joseph Benjamin, GP, Oriental; Duke, 1951	1952	1954

Name and Address

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SocietyPASQUOTANK-CAMDEN-CURRITUCK-DARE COUNTIES SOCIETY⁵⁸

OFFICERS—President: Weeks, J. F., (Biog. below), Elizabeth City		
Secretary: Bailey, Fletcher, (Biog. below), Elizabeth City		
Bailey, C. Fletcher, GP, 1502 Carolina Ave., Elizabeth City; Univ. of Md., 1945.....	1945	1948
Bailey, Mercer H., GP, P.O. Box 366, Elizabeth City; Northwestern, 1931.....	1933	1940
Barkwell, John Holloway, GP, Route 4, Elizabeth City; Atlanta Sch. of Med., 1908.....	1924	1925
Blanchard, Irvin T., GP, 207 Kramer Bldg., Elizabeth City; Temple, 1940.....	1940	1946
Bonner, John Bryan Havens, GP, 224 Carolina Bldg., Elizabeth City; Med. Coll. of Va., 1932.....	1932	1941
Booth, J. H. R., R. Albemarle Hospital, Elizabeth City; Tulane, 1921.....	1921	1952
Fearing, Isaiah, (Hon.), GP, 203 N. Main St., Box 125, Elizabeth City; P. & S., Baltimore, 1896.....	1896	1904
Gill, Joseph Armstrong, ObG, 1502 Carolina Ave., Elizabeth City; Syracuse Univ., 1932.....	1932	1936
Harrell, William Fletcher, Jr., Pd, P.O. Box 286, Elizabeth City; Univ. of Va., 1943.....	1947	1947
Hoggard, William Alden, Jr., GP, 1502 Carolina Ave., Elizabeth City; Bowman Gray, 1944.....	1944	1947
Horsley, Thomas Martin, I, 508 East Main St., Elizabeth City; Johns Hopkins, 1945.....	1951	1951
Johnston, Wiley Warren, (Hon.), PH, P.O. Box 175, Manteo; N. C. Med. Coll., 1913.....	1913	1915
Nash, T. P., III, S. Medical Bldg., Elizabeth City; Univ. of Tenn., 1945.....	1953	1953
North, Ellsworth Howard, Jr., GP, 1502 Carolina Ave., Elizabeth City; Univ. of Md., 1946.....	1949	1950
Owens, Zack Doxey, S, Medical Bldg., Elizabeth City; Univ. of Md., 1930.....	1930	1940
Peters, William Anthony, Jr., ObG, 206 S. Road St., Elizabeth City; Duke, 1943.....	1944	1944
Romm, William H., GP, P.O. Box 1, Moyock; Univ. of Va., 1950.....	1951	1952
Salters, Frederic Hay, OALR, Medical Bldg., Elizabeth City; S. C. Med. Coll., 1935.....	1939	1940
Sawyer, Logan Everett, I, 104 West Colonial Ave., Elizabeth City; Duke, 1939.....	1946	1947
Shipley, John LeRoy, OALR, 214 Kramer Bldg., Elizabeth City; St. Louis Univ. School of Med., 1917.....	1945	1948
Spaeth, Walter, I, 116 S. Road St., Elizabeth City; Duke, 1943.....	1947	1950
Stevens, William Leary, GP, Retired, Shiloh; Univ. of Va., 1912.....	1912	1914
Tharp, Donald W., GP, Box 106, Buxton; Univ. of Indiana, 1950.....	1952	1953
Thomas, William Ralph, GP, Route 4, Elizabeth City; Western Reserve Univ. Sch. of Med., 1949.....	1953	1953
Wassink, William Klein, GP, Shiloh; Leiden, Holland, 1948.....	1954	1955
Weeks, John F., GP, Medical Bldg., Elizabeth City; Jefferson, 1942.....	1942	1946
Wright, Charles Newbold, GP, Jarvisburg; Temple, 1941.....	1941	1946

Pender

PERQUIMANS—SEE CHOWAN-PERQUIMANS

PERSON COUNTY SOCIETY⁵⁹

OFFICERS—President: Gentry, George W., (Biog. below), Roxboro		
Secretary: Andrews, Robert J., (Biog. below), Roxboro		
Andrews, Robert Jackson, GP, P.O. Box 28, Roxboro; Univ. of Tenn., 1946.....	1948	1951
Bradsher, James Donald, GP, Box 168, Roxboro; Bowman Gray, 1945.....	1945	1950
Fitzgerald, John Dean, S, 409 Roxboro Bldg., Roxboro; Duke, 1934.....	1934	1937
Fitzgerald, Robert Greeson, GP, Prillaman Bldg., Box 256, Roxboro; Univ. of Md., 1947.....	1947	1950
Gentry, George W., (Hon.), GP, Box 146, Roxboro; Univ. of N. C., 1910.....	1910	1911
Hedgepeth, Emmett Martin, GP, Roxboro; Northwestern Univ., 1936.....	1937	1938
Long, David T., OALR, 405 S. Main St., Roxboro; Emory, 1917.....	1917	1919
Nichols, Austin Flint, (Hon.), GP, Box 498, Roxboro; Univ. of N. C., 1908.....	1908	1909
Thaxton, Benjamin Adams, (Hon.), GP, 111 Main St., Roxboro; Jefferson, 1914.....	1914	1916

PITT COUNTY SOCIETY⁶⁰

OFFICERS—President: Irons, C. F., (Biog. below), Greenville		
Secretary: Larkin, E. W., Jr., (Biog. below), Greenville		
Adams, Charles, GP, 109 Penn Avenue, Greenville; Wash. Univ., 1952.....	1952	1954
Alexander, Larry M., GP, 121 West Power St., Ayden; Duke, 1952.....	1954	1954
Armistead, D. Branch, I, 1001 E. 4th St., Greenville; Med. Coll. of Va., 1931.....	1935	1936
Aycock, Edwin Burtis, GP, Box 900, 500 Dickerson Ave., Greenville; McGill Univ., 1936.....	1936	1940
Barrett, John Milton, GP, 111 W. Third St., Greenville; Univ. of Penn., 1926.....	1926	1928
Bartlett, Stephen Russell, Jr., S, 1001 E. 4th St., Greenville; Duke, 1944.....	1950	1950
Beasley, Edward Bruce, (Hon.), GP, Fountain; Univ. of Penn., 1911.....	1911	1915
Brooks, Frederick Phillips, I, 525 Evans St., Greenville; Univ. of Mich., 1933.....	1933	1935
Brown, William Moyer Benjamin, OALR, Box 58, State Bank Bldg., Greenville; Med. Coll. of Va., 1929.....	1929	1931
Coffman, Selby Evans, Jr., GP, Grifton; Univ. of Louisville, 1950.....	1951	1951
†Crisp, Sellers Mark, GP, 500 Dickerson Ave., Greenville; Univ. of Penn., 1923.....	1923	1926
Davenport, Clifton, GP, 121 W. Power St., Ayden; Duke, 1952.....	1954	1954
Dixon, George Grady, (Hon.), GP, 215 E. Second St., Ayden; Med. Coll. of Va., 1915.....	1915	1917
Fitzgerald, Charles Edmund, GP, 116 N. Main St., Farmville; La. State Univ., 1937.....	1937	1940
Frizzelle, Mark Twain, (Hon.), GP, 112 N. Railroad St., Ayden; Univ. Coll. of Med., Richmond, 1907.....	1907	1907
Garrenton, Connell George, GP, Bethel Clinic, Bethel; Univ. of Penn., 1935.....	1935	1937

†Deceased

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Gradis, Howard Henry, S, 203 East Third Street, Greenville; Western Reserve Univ. Med. Sch., 1939.....	1950	1950
Haar, Frederick Behrend, Pd, State Bank Bldg., Greenville; Jefferson, 1932.....	1932	1935
Hadley, Herbert Wood, GP, 200 E. 10th St., Greenville; Bowman Gray, 1943.....	1943	1947
Hoot, Melvin P., OALR, 521 Evans St., Greenville; Univ. of Oklahoma, 1934.....	1946	1947
Huizenga, Ann Harriet, Ob, 1801 E. 4th St., Greenville; Rush, 1937.....	1951	1952
Humbert, Walter Cowden, PH, Box 726, 1704 E. Third St., Greenville; Vanderbilt, 1936.....	1952	1953
Irons, C. Fred, GP, 1001 E. Fourth St., Greenville; Med. Coll. of Va., 1941.....	1946	1946
Irons, Malene Grant, Pd, 801 Evans St., Greenville; Med. Coll. of Va., 1941.....	1946	1946
Jordan, Charles Daniel, GP, Bethel Clinic, Bethel; Med. Coll. of Va., 1948.....	1950	1950
Larkin, Ernest W., Jr., OALR, 123 W. Third St., Greenville; Med. Coll. of Va., 1945.....	1945	1951
Mewborn, John Moses, GP, 114 W. Church St., Farmville; Med. Coll. of Va., 1932.....	1932	1935
Minges, Ray D., S, Falkland Highway, Greenville; Med. Coll. of Va., 1944.....	1944	1954
Moody, W. A., GP, Bethel Clinic, Bethel; Duke, 1951.....	1953	1954
Moore, Davis Lee, GP, 525 Evans St., Box 931, Greenville; Jefferson, 1936.....	1936	1938
Mumford, Ander Morgan, GP, Winterville; Jefferson, 1942.....	1942	1944
Pace, Charles T., GP, State Bank Bldg., Greenville; Jefferson, 1949.....	1949	1954
Pace, Karl Busbee, (Hon.), GP, 412 State Bank Bldg., Greenville; Jefferson, 1914.....	1914	1920
Pott, Walter Hawks, ObG, Medical Arts Clinic, Greenville; Univ. of Va., 1917.....	1944	1944
Smith, James J., GP, 202 W. 3rd St., Greenville; Univ. of Tenn., 1944.....	1948	1948
Smith, Joseph, GP, 202 W. Third St., Greenville; Med. Coll. of Va., 1914.....	1916	1920
Taylor, Allen, R, Pitt Mem. Hosp., Greenville; Duke, 1947.....	1952	1954
Trevathan, G. Earl, Pd, Falkland Rd., Greenville; Univ. of Colorado, 1951.....	1954	1954
Troutman, Belk Connor, GP, Box 428, 113 Pitt St., Grifton; Univ. of Md., 1952.....	1952	1953
Watters, John L., GP, 109 Penn. Ave., Greenville; Univ. of Md., 1952.....	1952	1954
Williams, Roderick Thomas, GP, 122 N. Main St., Farmville; Vanderbilt Univ., 1937.....	1937	1942
Winstead, John Lindsay, S, 1001 East Fourth Street, Greenville; Univ. of Md., 1925.....	1925	1930
Wooten, John L., Or, 416 Greene St., Greenville; Duke, 1947.....	1954	1955

POLK COUNTY SOCIETY⁶¹

OFFICERS—President: Woody, J. W. A., (Biog. below), Tryon

Secretary: Welburn, J. W., (Biog. below), Tryon

Bosien, Marian K., Anes, Tryon; Univ. of Penn., 1948.....	1950	1955
Bosien, William R., S, Tryon; Univ. of Penn., 1948.....	1949	1955
Palmer, Marion Cherigny, (Hon.), GP, Box 1156, Trade St., Tryon; Med. Coll. of S. C., 1910.....	1911	1914
Preston, John Zennas, GP, Tryon; Temple, 1934.....	1935	1937
Vosburgh, George S., Jr., GP, P.O. Box 1486, Tryon; Northwestern Univ., 1950.....	1952	1952
Walden, Burt M., GP, Box 37, Landrum, S. C.; Tulane, 1949.....	1949	1950
Welborn, Julius Warren, Jr., GP, Box 1323, Tryon; Med. Coll. of S. C., 1951.....	1952	1952
Woody, John Wycliffe Austin, GP, Box 1111, Tryon; Univ. of Penn., 1937.....	1939	1940

RANDOLPH COUNTY SOCIETY⁶²

OFFICERS—President: Johnston, G. B., (Biog. below) Asheboro

Secretary: Medlin, J. R., (Biog. below), Asheboro

Barham, Berlin F., GP, 533 S. Fayetteville St., Asheboro; Washington Univ., 1939.....	1939	1941
Barnes, Jesse Thomas, GP, 125 Sunset Ave., Asheboro; Med. Coll. of Va., 1929.....	1929	1932
Burnette, Howard O., GP, Main St., Randleman; Med. Coll. of Va., 1947.....	1948	1949
Cannon, Eugene Bolivia, Pd, 151 N. Fayetteville St., Asheboro; Vanderbilt Univ., 1937.....	1937	1941
Cleek, Thornton R., GP, 213 S. Fayetteville St., Asheboro; Med. Coll. of Va., 1950.....	1951	1952
Cochran, John L., GP, 149 McArthur Street, Asheboro; Bowman Gray, 1950.....	1952	1953
Dalton, Bennie Booker, GP, 149 McArthur St., Asheboro; Duke, 1932.....	1933	1935
Edmondson, Frank, Jr., GP, 317 Sunset Ave., Asheboro; Temple Univ., 1937.....	1937	1939
Eller, Luke Branson, GP, Liberty; Bowman Gray, 1953.....	1953	1955
Fitzpatrick, Hugh, GP, 213 S. Fayetteville St., Asheboro; Med. Coll. of Va., 1950.....	1951	1952
Fowle, Willis Happer, III, GP, 514 S. Fayetteville St., Asheboro; Temple Univ., 1952.....	1953	1954
Freeman, Alton Brooks, GP, Box 516, Randleman; Jefferson, 1929.....	1929	1947
Fritz, Jacob Luther, GP & Ind, 317 Sunset Ave., Asheboro; Temple Univ., 1936.....	1936	1938
Griffin, Harvey Lee, GP, 212 S. Fayetteville St., Asheboro; Med. Coll. of Va., 1926.....	1926	1928
Johnston, George B., S, 127 McArthur St., Asheboro; Jefferson, 1945.....	1945	1952
Joyner, George William, S, 127 McArthur St., Asheboro; Duke Univ., 1932.....	1937	1938
Kramer, Morris, R, 373 N. Fayetteville St., Asheboro; Univ. of Zurich, Switzerland, 1944.....	1955	1955
Medlin, Jasper R., GP, 533 S. Fayetteville St., Asheboro; Bowman Gray, 1952.....	1952	1953
Owen, Charles Fletcher, Jr., R, Randolph Hospital, Asheboro; Univ. of Penn., 1937.....	1937	1940
Query, Luke W., Jr., I, 533 S. Fayetteville St., Asheboro; Med. Coll. of Va., 1941.....	1941	1949
Redding, John O., OALR, 147 McArthur St., Asheboro; Univ. of Penn., 1931.....	1931	1946
Shackleford, Ernest Dabney, Jr., GP, 2001 Liberty Rd., Asheboro; Med. Coll. of Va., 1952.....	1953	1955
Smith, Melvin Bowman, GP, Ramseur; Univ. of Penn., 1938.....	1938	1940
Suggs, C. Ann Howard, Pd, 317 Ridgecrest Rd., Asheboro; Med. Coll. of Va., 1947.....	1950	1951
Sykes, Rufus Preston, GP, 134 Sunset Ave., Asheboro; Tulane Univ., 1929.....	1929	1931
White, Hayes MacM., S, 147 McArthur St., Asheboro; Duke, 1945.....	1945	1953
Wilhoit, Robert M., GP & Ind, 514 S. Fayetteville St., Asheboro; Duke, 1947.....	1948	1950
Woodruff, William Egleston, S, USS Boxer, C/o FPO, San Francisco, Calif; Duke, 1940.....	1945	1946

Name and Address

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SocietyRICHMOND COUNTY SOCIETY⁶³

OFFICERS—President: McIntosh, William R., (Biog. below), Rockingham		
Secretary: Wheliss, John A., (Biog. below), Rockingham		
Blackley, Roy Jackson, GP, State Hosp., Butner; McGill Univ., 1953.....	1953	1954
Bristow, Charles Oliver, (Hon.), GP, 6 & 7 Cole Bldg., P.O. Box 483, Rockingham; Jefferson, 1918.....	1920	1921
Buchanan, Luther Thomas, (Hon.), GP, 2325 Sunrise Drive, S., St. Petersburg 5, Fla.; Jefferson Medical College, 1913.....	1913	1914
Garrett, Frank Bernard, (Hon.), OALR, Rockingham; N. C. Med. Coll., 1912.....	1912	1914
Garrison, Ralph Bernard, GP, 222 N. Main St., Hamlet; Univ. of Md., 1933.....	1933	1935
Haines, Hilton Drummond, ObG, 118 S. Lawrence, Rockingham; George Washington University, 1934.....	1939	1947
Hatcher, Martin Armstead, (Hon.), GP, 31 Hamlet Ave., Hamlet; Med. Coll. of Va., 1918	1920	1921
Henry, Tidal Boyce, (Hon.), GP & Ins, Watson Bldg., Rockingham; Columbia University, 1917.....	1920	1921
Howell, William Lawrence, (Hon.), GP, Box 83, Ellerbe; N. C. Med. Coll., 1910.....	1910	1912
Ingalls, Clair Lacey, S, Professional Bldg., 109 S. Hancock St., Rockingham; Indiana University, 1926.....	1952	1952
James, William Duer, Jr., S, Hamlet Hospital, Hamlet; La. State Med. Center, 1941.....	1941	1942
Lindsey, Mark McDonald, S, Hamlet Hosp., Hamlet; Yale Univ., 1945.....	1948	1952
Long, Zachary Fillmore, GP, Box 605, 304 E. Washington St., Rockingham; Univ. of Penn., 1928.....	1928	1930
Milham, Claude Gilbert, R, Milham Clinic, Hamlet; Jefferson Med. Coll., 1927.....	1927	1930
Nicholson, Neill Graham, Sr., (Hon.), OALR, Box 505, Rockingham; N. C. Med. Coll., 1917.....	1917	1920
Nicholson, Neal Graham, Jr., OALR, Rockingham; Bowman Gray, 1946.....	1946	1953
Parsons, William Herbert, (Hon.), GP, Box 186, Ellerbe; N. C. Med. Coll., 1916.....	1916	1919
Sutton, Edward C., GP, Rockingham; Univ. of Penn., 1951.....	1951	1953
Watters, Vernon Gregg, Jr., S, 303 Leak St., Rockingham; Univ. of Iowa, 1938.....	1947	1947
Whims, Harold Carter, PH, 139 N. Cox St., Asheboro; Univ. of Md., 1931.....	1931	1933
White, Phillip Fletcher, GP, 104 S. Randolph St., Rockingham; Hahnemann Med. Coll., 1942.....	1948	1948

ROBESON COUNTY SOCIETY⁶⁴

OFFICERS—President: Gibson, F. D., Jr., (Biog. below), Fairmont		
Secretary: Hedgpeth, L. R., (Biog. below), Lumberton		
Alexander, Joseph Black, I. Scottish Bank Bldg., Lumberton; Bowman Gray, 1947.....	1948	1950
Allen, George Calvin, OALR, P.O. Box 981, 417 N. Elm St., Lumberton; Rush Med. Coll., 1932.....	1933	1934
Baker, Horace Mitchell, Jr., S, Medical Arts Bldg., Lumberton; Duke, 1944.....	1944	1948
Baluss, John W., Jr., Or, (also see Cumberland County), 232 Ray Avenue, Fayetteville; Univ. of Mich., 1940.....	1950	1951
Bender, John Joseph, GP, Box 630, Red Springs; Coll. of P. & S., Boston, 1935.....	1937	1939
Bennett, Ernest Claxton, GP, (also see Bladen County), Box 295, Elizabethtown; Med. Coll. of Va., 1926.....	1926	1927
Benson, Norman Oliver, U, 206 E. Fifth St., Lumberton; Univ. of Ga., 1930.....	1933	1934
Biggs, Dennis Walter, Jr., GP, 419½ N. Elm St., Box 872, Lumberton; Bowman Gray, 1948.....	1949	1950
Biggs, John Irvin, S & Or, Box 955, 208 E. 14th St., Lumberton; Northwestern Univ., 1932.....	1937	1938
Bridger, Clarence Edgerton, GP, (also see Bladen County), Box 428, Bladenboro; Bowman Gray, 1946.....	1946	1949
Britt, James Norment, (Hon.), GP, Elm & 4th St., Box 962, Lumberton; Atlanta Med. Coll., 1914.....	1923	1924
Bullock, Duncan Douglas, Sr., GP, Box 305, 6 E. Main St., Rowland; Med. Coll. of S. C., 1920.....	1927	1939
Clark, Dewitt Duncan, (Hon.), GP, (Also see Bladen County), Box 725, Clarkton; Med. Coll. of Va., 1917.....	1917	1920
Clark, Douglas Hendon, S, 14th and Chestnut St., Lumberton; Univ. of N. C., 1944.....	1945	1952
Croom, Robert DeVane, Jr., GP, Carpenter Bldg., Maxton; Med. Coll. of Va., 1934.....	1934	1937
Currie, D. S., Sr., (Hon.), GP, (also see Cumberland County), Box 108, Parkton; N. C. Med. Coll., 1906.....	1906	1906
Floyd, Hal Stanfield, GP, 183 S. Main St., Fairmont; Med. Coll. of Va., 1943.....	1943	1948
Gibson, Francis Duncan, Jr., GP, Box 148, Fairmont; Emory, 1940.....	1940	1946
Hardin, Eugene Ramsey, (Hon.), PH, Robeson County Health Dept., Lumberton; Univ. of Ga., 1911.....	1915	1916
Hayes, James Willard, GP, S. Main St., Box 392, Fairmont; Med. Coll. of S. C., 1937.....	1938	1946
Hedgneth, Louten Rhodes, OALR, Med. Arts Bldg., Box 1081, Lumberton; Univ. of Md., 1933.....	1933	1934
Hedgpeth, William Carey, ObG, Box 1021, Lumberton; Northwestern, 1933.....	1933	1936
Hodgin, Henry Hiram, (Hon.), GP, Red Springs; N. C. Med. Coll., 1906.....	1906	1906
Holmes, Andrew Byron, (Hon.), GP, Box 413, 112 Church St., Fairmont; Jefferson, 1910	1910	1914
Hooks, Richard Eugene, GP, Box 306, St. Pauls; University of Maryland, 1947.....	1947	1948
Inman, Charles Ernest, GP, S. Main St., Fairmont; Duke, 1951.....	1953	1953
Johnson, Charles Thomas, (Hon.), GP, Red Springs; Jefferson Med. Coll., 1920.....	1920	1922

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Johnson, Charles Thomas, Jr., GP, Red Springs; Jefferson, 1953.....	1953	1953
Kinlaw, J. Brady, GP, Box 126, Rowland; Temple, 1943.....	1943	1947
Kinlaw, Murray Carlyle, GP, 422 Chestnut St., Lumberton; Temple Univ., 1935.....	1936	1937
Martin, James Alfred, (Hon.), Pd, Box 715, Lumberton; Med. Coll. of Va., 1915.....	1915	1917
McAllister, Hugh Alexander, ObG, Medical Arts Bldg., Lumberton; Duke, 1937.....	1937	1940
McGrath, Frank Bernard, GP, 1808 N. Pine St., Lumberton; Northwestern Univ., 1933.....	1937	1938
McIntyre, Stephen, S, 2100 N. Elm St., Lumberton; Jefferson Med. Coll., 1928.....	1928	1930
McMillan, Roscoe Drake, (Hon.), GP, Box 232, Red Springs; Univ. of Md., 1910.....	1911	1912
Mees, Theo H., I, 27th & Rowland Ave., Lumberton; Duke, 1942.....	1946	1946
Nash, John Frederick, (Hon.), GP, Broad St., Box 296, St. Pauls; N. C. Med. Coll., 1914.....	1914	1916
Parsons, Lacy Jack, GP, P.O. Box 1057, Lumberton; N. Y. Univ. Med. Sch., 1942.....	1943	1946
Pate, James Lloyd, GP, Box 67, Pembroke; Bowman Gray, 1948.....	1949	1951
Pate, Marion Butler, Jr., GP, Box 326, St. Pauls; Bowman Gray, 1945.....	1945	1948
Pittman, Alfred Rowland, Jr., I, Johnson Bldg., Lumberton; Duke, 1945.....	1945	1948
Pittman, James G., GP, Box 145, Fairmont; Bowman Gray, 1946.....	1947	1950
Robertson, John Kenneth, GP, Box 67, Pembroke; Univ. of Va., 1950.....	1950	1951
Silverton, George, R, Robeson County Mem. Hosp., Lumberton; Univ. of Md., 1932.....	1949	1949
Ward, D. Ernest, Jr., S, 403 Scottish Bank Bldg., Lumberton; Bowman Gray, 1945.....	1945	1953
Ward, Frank Pelouse, I, 501 W. 27th St., Lumberton; Med. Coll. of S. C., 1943.....	1943	1944
Wester, Thaddeus Bryan, Pd, Medical Arts Bldg., Lumberton; Duke Univ., 1950.....	1953	1954
Weinstein, Rayford Lee, GP, Weinstein Clinic, Fairmont; Jefferson, 1936.....	1936	1938

ROCKINGHAM COUNTY SOCIETY⁶⁵

OFFICERS—President: Balsley, Robert E., (Biog. below), Reidsville		
Secretary: Stallard, S. K., (Biog. below), Reidsville		
Beach, William R., GP, Box 471, Madison; Emory, 1934.....	1934	1935
Balsley, Robert Eugene, Pd, Box 817, Reidsville; Univ. of Va., 1944.....	1944	1950
Clarke, Len Gordon, GP, Draper; Bowman Gray, 1949.....	1949	1953
Clay, Thomas Barger, Jr., GP, 22 Bender Court, Deep Creed Blvd., Portsmouth, Va.; Univ. of Buffalo, 1947.....	1949	1950
Cox, Alexander McNeil, GP, Madison; Med. Coll. of Va., 1932.....	1932	1938
Cozart, Benjamin Franklin, GP & Ind, 1116 S. Main St., Reidsville; Med. Coll. of Va., 1931.....	1931	1931
Crescenzo, Victor M., I, 315 S. Main St., Reidsville; Bowman Gray, 1943.....	1943	1948
Crosby, Lewis Pearce, GP, 200 S. Main St., Reidsville; Univ. of Louisville, 1952.....	1953	1954
Cummings, Michael Penn, (Hon.), GP, Box 997, 224½ S. Scales St., Reidsville; Jefferson Med. Coll., 1911.....	1911	1913
Dillard, S. B., GP, Dept. of Dermatology, Univ. of Va. Hosp., Charlottesville, Va.; Med. Coll. of Va., 1946.....	1946	1950
Elliott, John Palmer, GP, 115 E. Ridge Ave., Draper; George Washington Univ., 1942.....	1942	1949
Forbes, Thos. Earl, GP, 307 W. Morehead St., Box 659, Reidsville; Jefferson Med. Coll., 1940.....	1940	1942
Fulp, James Francis, GP, Stoneville; Duke, 1935.....	1937	1940
Gullingsrud, Miles J. O., PH, Public Health, Leaksville; Harvard, 1939.....	1955	1955
Harris, Russell P., Jr., S, 201 Henry St., Leaksville; Univ. of Louisville, 1943.....	1943	1947
Hester, William Shepherd, S, 216 Main St., Reidsville; Jefferson Med. Coll., 1926.....	1929	1930
John, James E., Jr., GP & Ind., Mayodan; Univ. of Va., 1952.....	1954	1955
Johnson, William Alexander, (Hon.), GP, 224½ Scales St., Reidsville; N. C. Medical College, 1907.....	1909	1910
Joyce, Charles Weldon, GP, 200 Decateur St., Madison; Bowman Gray, 1947.....	1948	1949
Klenner, Fred Robert, GP, Reidsville; Duke, 1936.....	1937	1940
Mangum, Carlyle Thomas, Jr., GP, Leaksville; Harvard, 1947.....	1947	1949
Mangus, Julian Edward, GP, 533 Morgan St., Spray; Jefferson, 1940.....	1951	1951
Matthews, William W., (Hon.), GP, Box M, Leaksville; Chicago Coll. of Med. and Surgery, 1913.....	1915	1916
Millman, Theodore Harris, GP, P.O. Box 156, Spray; Univ. of Wisconsin, 1939.....	1950	1951
Morice, Charles Hunter, S, 117½ Gilmer St., Reidsville; Univ. of Md., 1939.....	1939	1942
Ray, John B., (Hon.), GP, Leaksville; Baltimore Med. Coll., 1898.....	1898	1898
Reeser, A. W., GP, Box 186, Leaksville; Univ. of Tenn., 1936.....	1936	1947
Reynolds, Ernest Harold, GP, Box 1257, 117 Gilmer St., Reidsville; N. Y. Univ., 1935.....	1935	1936
Rudd, Paul Dalton, I, Reidsville; Med. Coll. of Va., 1932.....	1935	1935
Sanford, Joseph Arthur, Ind, Field Crest Mills, Spray; Marquette Univ., 1932.....	1948	1948
Sherrill, Frank H., Jr., GP, 116 W. Franklin St., Leaksville; Bowman Gray, 1950.....	1950	1952
Shields, William Earnest, S, 117 Gilmer St., Reidsville; Bowman Gray, 1944.....	1944	1955
Stallard, Sam Kane, GP, Reidsville; Harvard, 1951.....	1951	1953
Thomas, James V., GP, Box 426, Leaksville; Bowman Gray, 1945.....	1948	1948
Trigg, William White, Jr., GP, 216 S. Main St., Reidsville; Med. Coll. of Va., 1952.....	1953	1954
Truslow, Ray E., R, 618 Main St., Reidsville; Bowman Gray, 1945.....	1945	1953
Tyner, Carl Vann, (Hon.), S, 140 N. Henry St., Leaksville; Univ. & Bellevue Hospital Med. Coll., New York, 1916.....	1916	1919

ROWAN-DAVIE COUNTIES SOCIETY⁶⁶

OFFICERS—President: Thurston, T. G., (Biog. below), Salisbury		
Secretary: Lomax, D. H., (Biog. below), Salisbury		
Agner, Roy A., I, 701 Barker Street, Salisbury; Duke, 1951.....	1952	1955
Anderson, Henry Shaw, GP, 222 N. Main St., Mocksville; Bowman Gray, 1950.....	1950	1952

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Armstrong, Charles Wallace, (Hon.), PH, Health Center, Salisbury; Univ. of Md., 1914	1915	1915
Bailey, Hilda H., Pd, Box 1156, 128½ N. Main St., Salisbury; Univ. of Penn., 1945	1946	1947
Black, Oscar Reid, (Hon.), GP, Box 286, R. R. Ave., Landis; N. C. Med. Coll., 1914	1914	1918
Brown, Clarence Emanuel, (Hon.), GP, Box 96, Faith; N. C. Med. Coll., 1918	1920	1921
Brown, James Arthur, GP, Main St., Cleveland; Tulane, 1934	1934	1938
Busby, George Francis, S, Box 1279, Salisbury; Johns Hopkins, 1932	1932	1936
Busby, Julian Goode, (Hon.), Pr & D, 901 W. Henderson St., Salisbury; Univ. of Md., 1904	1904	1905
Busby, Trent, ObG, 901 W. Henderson St., Salisbury; Johns Hopkins, 1946	1953	1954
Choate, Glenn, (Hon.), GP, Wallace Bldg., Salisbury; N. C. Med. Coll., 1909	1909	1909
Choate, James Walter, (Hon.), GP, 400 Wallace Bldg., Salisbury; Med. Coll. of Va., 1915	1915	1924
Cline, Wayne Allen, U, 909 W. Henderson St., Salisbury; Bowman Gray, 1946	1947	1953
Coffey, James Cecil, GP, 130 N. Main St., Salisbury; Emory Univ., 1937	1937	1940
Dameron, Joseph T., S, 102 W. Innes St., Salisbury; Bowman Gray, 1945	1945	1953
Eagle, James Carr, (Hon.), GP, 117 Fifth St., Spencer; Jefferson Med. Coll., 1923	1923	1925
Erb, Norris Scribner, U, 909 W. Henderson St., Salisbury; Med. Coll. of Va., 1944	1946	1947
Feezor, Charles Noel, GP, 704 Wallace Bldg., Salisbury; Temple, 1937	1937	1940
Field, Bob Lewis, GP, Professional Bldg., Salisbury; Med. Coll. of Va., 1931	1933	1939
Frazier, John Wesley, Jr., U, 909 W. Henderson St., Salisbury; Jefferson, 1924	1924	1927
Glover, Francis O., GP, P.O. Box 493, 504 Wallace Bldg., Salisbury; Univ. of Penn., 1928	1931	1932
Gregory, John E., Path, Rowan Mem. Hosp., Salisbury; Univ. of Cinn., 1940	1953	1954
Hall, Joseph Cullen, ObG, 500 Mocksville Ave., Salisbury; Vanderbilt, 1942	1942	1948
Harris, C. Ted, GP, 102 W. Innes St., Salisbury; Univ. of Va., 1951	1951	1953
Kavanagh, William Paul, GP, Cooleemee; Duke, 1935	1938	1939
Ketchie, James Meredith, (Hon.), GP, Box 1354, Salisbury; Jefferson, 1922	1922	1925
Kiser, Glenn, Pd, Medical Arts Bldg., Salisbury; Duke, 1941	1946	1948
Little, J. R., OALR, Box 1277, Salisbury; Jefferson, 1942	1942	1947
Lomax, Donald H., GP, 516 Mocksville Ave., Salisbury; Bowman Gray, 1951	1951	1955
Lombard, Elizabeth, GP, Rockwell; Coll. of Med. Evang., 1953	1954	1954
Long, William Matthews, GP, S. Main St., Mocksville; Tulane Univ., 1933	1934	1934
Lowery, John Robert, (Hon.), GE, 510 W. Innes St., Salisbury; Univ. of Md., 1904	1904	1913
Marsh, Frank Baker, (Hon.), I & C & A, 713 Barker St., Salisbury; Jefferson, 1919	1919	1922
McCutchan, Frank, OALR, 102 W. Innes St., Salisbury; Univ. of Va., 1920	1927	1928
McKenzie, Benjamin Whitehead, (Hon.), S, 709 Barker St., Salisbury; Jefferson, 1916	1916	1920
Mock, Charles Glenn, Path & Hosp Res, Bowman Gray Sch. of Med., Winston-Salem; University of Pennsylvania, 1935	1935	1938
Monk, Henry Lawrence, (Hon.), GP, Wallace Bldg., Salisbury; Med. Coll. of Va., 1899	1899	1903
Murphy, Thomas Lynch, I, 116 Rutherford St., Salisbury; Harvard, 1943	1943	1954
Newman, Harold Hastings, Jr., GP, Box 264, Salisbury; Johns Hopkins, 1945	1945	1948
Oliver, Joseph Andrew, GP, P. O. Box 458, Rockwell; Coll. of Med. Evang., 1933	1935	1937
Parrott, Frank Strong, S, Box 597, 126 West Innes St., Salisbury; Univ. of Md., 1943	1943	1954
Rendleman, David A., GP, 700 Wallace Bldg., Salisbury; Emory, 1944	1944	1948
Robertson, Lloyd Harvey, GP, Box 519, 101 N. Main St., Salisbury; Univ. of Penn., 1929	1929	1931
Scott, Alan F., GP, Barker St., Salisbury; Univ. of Penn., 1943	1943	1947
Seay, Thomas Waller, (Hon.), GP, Bank Bldg., Fifth St., Spencer; Univ. of Md., 1921	1922	1924
Shafer, Irving Everett, (Hon.), GP, 108 W. Innes St., Salisbury; N. C. Med. Coll., 1914	1914	1914
Shafer, Irving Everett, Jr., R, 3535 A. F. Hosp., Mather Airfield Base, Mather Field, Calif.; Medical College of Virginia, 1949	1949	1950
Shinn, George Clyde, GP, Box 183, China Grove; Univ. of Md., 1933	1933	1940
Smith, Jay Leland, Jr., GP, 110 4th St., Spencer; Jefferson, 1942	1942	1946
Spencer, Frederick Brunell, (Hon.), GP, 200 S. Main St., Salisbury; Univ. of N. C., 1909	1909	1911
Spencer, Frederick Brunell, Jr., I, Med. Arts Bldg., Salisbury; Med. Coll. of Va., 1945	1945	1955
Taylor, Charles Whitfield, P, Vet. Admn. Hosp., Salisbury; Med. Coll. of Va., 1933	1933	1955
Thurston, Thomas G., R, 512 Mocksville Ave., Salisbury; Harvard, 1941	1941	1947
Walters, H. Grover, S, U. S. Naval Hosp., Charleston, S. C.; Univ. of Md., 1948	1948	1953
Wear, John E., R, Rowan Hospital, Salisbury; Northwestern, 1945	1952	1952
Wentz, Irl J., Or S, Med. Arts Bldg., Barker St., Salisbury; Univ. of Md., 1946	1954	1954
Whicker, Max Evans, GP, Box 506, China Grove; Univ. of Md., 1932	1932	1934
Wright, Richard B., GP, Box 507, Salisbury; Tulane, 1942	1942	1947

RUTHERFORD COUNTY SOCIETY⁶⁷

OFFICERS—President: Moss, G. O., (Biog. below), Rutherfordton

Secretary: Hendrick, Harry V., (Biog. below), Rutherfordton

Bass, Beaty Lee, S, Rutherfordton; Tulane Univ., 1939	1939	1943
Becknell, George F., GP, Box 278, 407 S. Broadway St., Forest City; Med. Coll. of S. C., 1951	1952	1953
Bostic, William Chivous, (Hon.), GP, Box 215, Forest City; N. C. Med. Coll., 1905	1905	1905
Bostic, William Chivous, Jr., GP, P.O. Box 215, Forest City; Univ. of Penn., 1926	1926	1927
Eaves, Rupert Spencer, GP, 205 Main St., Rutherfordton; Med. Coll. of Va., 1932	1932	1933
Elliott, William McBrayer, GP, 107 Powell St., Forest City; Univ. of Ga., 1934	1934	1935
Glenn, Charles Foster, S, Rutherford Hosp., Rutherfordton; Univ. of Louisville, 1914	1927	1928
Harrill, Lawson Baxter, (Hon.), GP, Box 176, Caroleen; Chattanooga Med. Coll., 1897	1902	1904
Head, William Thomas, (Hon.), GP, Melvin Hill; Atlanta Coll. of P. & S., 1911	1911	1923
Hendrick, Harry V., S, Rutherford Hosp., Rutherfordton; Johns Hopkins, 1943	1947	1947
Hunt, John Franklin, (Hon.), GP, 306 Maryland Ave., Spindale; Univ. of Tenn., 1900	1900	1912

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Logan, Frank, Jr., GP, 109½ West Second St., Rutherfordton; Johns Hopkins, 1946.....	1950	1951
Logan, Frank William Hicks, (Hon.), GP, 109½ W. Second St., Rutherfordton; N. C. Med. Coll., 1916.....	1916	1919
Lovelace, Thomas Claude, (Hon.), GP, P.O. Box 295, Henrietta; N. C. Med. Coll., 1917	1920	1920
Mebane, John G., I, Rutherford Hospital, Rutherfordton; Harvard, 1941.....	1948	1949
Mills, Hugh Harrison, I, Box 262, Forest City; Harvard, 1940.....	1940	1946
Mitchell, Landis Patterson, GP, 103 Wilson St., Spindale; Washington Univ., 1938.....	1940	1941
Moss, Geo. Oren, PH, Rutherford Health Center, Rutherfordton; Emory, 1927.....	1927	1929
Tanner, Kenneth S., Jr., S. Rutherford Hospital, Rutherfordton; Harvard, 1943.....	1947	1948
Verner, Carl Hugh, GP, 224 W. Forest St., Forest City; P. & S., Atlanta, 1912.....	1923	1927
Washburn, Benjamin Earl, (Hon.), PH, Retired, 218 S. Ridgecrest Ave., Rutherfordton; Univ. of Va., 1911.....	1912	1917
Weir, A. Frank, GP, Box 278, Cliffside; Bowman Gray, 1953.....	1953	1955
Williams, Trevor G., GP, Charlotte-Rutherford Highway, Forest City; Univ. of Ga., 1948.....	1948	1952
Wiseman, Perry Haynes, GP, Avondale; Med. Coll. of Va., 1925.....	1925	1926
Yelton, Ernest H., GP, Box 589, Rutherfordton; Cornell Univ., 1942.....	1942	1949

SAMPSON COUNTY SOCIETY⁶⁸

OFFICERS—President: Nance, John W., (Biog. below), Clinton Secretary: Kitchin, W. W., (Biog. below), Clinton		
Ayers, James Salisbury, GP, Main St., Clinton; Jefferson Med. Coll., 1932.....	1932	1937
Best, Glenn Eben, GP, Main St., Clinton; Temple Univ., 1938.....	1938	1940
Brewer, James Street, (Hon.), GP, P.O. Box 98, Roseboro; Jefferson Med. Coll., 1919.....	1919	1921
Bullard, Lubin Fletcher, Jr., GP, Box 14, Garland; Duke Univ., 1953.....	1953	1954
Crumpler, Paul, (Hon.), GP, 401 Lafayette St., Clinton; Univ. of Tenn., 1907.....	1907	1908
Howard, J. Cooper, S. Sampson Co. Mem. Hosp., Clinton; Temple, 1942.....	1942	1947
Johnson, Amos Neill, GP, Garland; Univ. of Penn., 1933.....	1933	1935
Kendall, John Harold, GP, 707 College St., Clinton; Coll. of Med. Evang., 1934.....	1935	1935
Kitchin, William Walton, S. Sampson County Hospital, Clinton; Jefferson, 1940.....	1940	1950
Lee, J. Marshall, (Hon.), GP, Newton Grove; Med. Coll. of Va., 1916.....	1920	1923
Nance, John Wesley, GP, 120½ Main St., Clinton; Bowman Gray, 1948.....	1949	1952
Nelson, William Howell, GP, Cooper Drive, Clinton; Temple, 1934.....	1934	1936
Newman, Glenn Carraway, I, 113 Fayetteville St., Clinton; Duke, 1939.....	1946	1946
Parker, Oscar Lee, (Hon.), OALR, Box 869, 104 Main St., Clinton; Med. Coll. of Va., 1918.....	1918	1919
Royal, Donnie Martin, GP, Box 156, Salemburg; Med. Coll. of Va., 1926.....	1926	1928
Sikes, Gibson L., (Hon.), GP, 1909 St. Mary's St., Raleigh; Univ. Coll. of Med., Va., 1900	1900	1902
Sloan, William Henry, (Hon.), GP, Box 128, Garland; Univ. of Md., 1916.....	1916	1920
Small, Victor Robert, (Hon.), GP, Box 387, 709 College St., Clinton; Ohio State University, 1916.....	1920	1921
Starling, Wyman Plato, GP, Box 297, Roseboro; Med. Coll. of Va., 1933.....	1933	1936

SCOTLAND COUNTY SOCIETY⁶⁹

OFFICERS—President: Erwin, E. A., (Biog. below), Laurinburg Secretary: Moore, K. C., (Biog. below), Laurinburg		
Brown, William T., S. Scotland Co. Mem. Hosp., Laurinburg; Northwestern Univ., 1945	1948	1950
Creed, George O., GP, 208 State Bank Bldg., Laurinburg; Med. Coll. of S. C., 1942.....	1946	1946
Erwin, Evan A., Jr., R. Box 866, Laurinburg; Jefferson, 1943.....	1943	1946
Forbes, Gus E., I, c/o Scotland County Hosp., Laurinburg; Univ. of Penn., 1943.....	1943	1948
Ford, Blanchard Fred, GP, Box 97, Maxton; Med. Coll. of S. C., 1938.....	1946	1946
Griffin, Wm. Robert, GP, Box 326, Laurinburg; Med. Coll. of S. C., 1946.....	1950	1951
Jameson, E. Carleton, S, 8417 Thouron Ave., Philadelphia 19, Penn.; Univ. of Penn., 1942	1952	1953
Livingston, Everett Alex, (Hon.), GP, Box K, Gibson; Univ. of Md., 1912.....	1912	1913
Moore, Kinchen Carl, (Hon.), PH, Scotland County Health Dept., Laurinburg; University of Michigan, 1909.....	1909	1910
Nesmith, Louis Edward, GP, Main St., Box 326, Laurinburg; Med. Coll. of S. C., 1943	1949	1950
Pate, James Gibson, (Hon.), GP, Box G, Gibson; Univ. of Penn., 1916.....	1916	1918
Richardson, James Justus, S, 600 McLean St., Laurinburg; Temple, 1942.....	1947	1947
Summerlin, Harry, GP, 203 Atkinson St., Laurinburg; Med. Coll. of S. C., 1933.....	1933	1935
Womble, Edwin Cornelius, GP, Box C, Wagram; Med. Coll. of S. C., 1942.....	1942	1947

STANLY COUNTY SOCIETY⁷⁰

OFFICERS—President: Fox, R. E., (Biog. below), Albemarle Secretary: Murray, H. L., (Biog. below), Albemarle		
Allen, Joseph A., (Hon.), GP, Retired, New London; Univ. Coll. of Med., Va., 1901.....	1901	1904
Bivens, Edward Shirley, R. Stanly County Hospital, Albemarle; Bowman Gray, 1946.....	1947	1951
Brunson, Edward Porcher, S, 122 W. North St., Albemarle; Jefferson Med. Coll., 1921	1922	1934
Dunlap, Lucius Victor, (Hon.), GP, 128 W. Main St., Albemarle; Univ. of N. C., 1909.....	1909	1910
Eddins, George Edgar, Jr., I, Box 815, 214 E. North St., Albemarle; Cornell, 1945.....	1951	1951
Fox, Dennis Bryan, S, 330 N. First St., Albemarle; Vanderbilt Univ., 1937.....	1937	1941
Fox, Robert Eugene, PH, Box 707, Albemarle; Univ. of Penn., 1926.....	1926	1929
Freeman, William H., S, 330 N. First St., Albemarle; Bowman Gray, 1944.....	1944	1947
Gaskin, John Stover, GP, P.O. Box 28, Albemarle; Med. Coll. of S. C., 1925.....	1929	1931
Gaskin, Madge Baker, GP, 165 N. 2nd St., Albemarle; Med. Coll. of S. C., 1926.....	1933	1934

ROSTER OF FELLOWS

99

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Griggs, Willard Wilson, GP, Box 217, Norwood; Temple, 1937.....	1937	1948
Hill, William Henry, GP, 115 S. Street, Albemarle; Bowman Gray, 1944.....	1944	1946
Johnson, John Martin, Jr., Path, Stanly Co. Hosp., Albemarle; Univ. of Va., 1948.....	1953	1953
Kelley, Thomas Francis, GP, Box 749, Albemarle; Duke, 1946.....	1949	1950
Lapsley, Alberti Fraser, GP, Badin Clinic, Badin; Med. Coll. of Va., 1933.....	1936	1937
Laton, James Franklin, (Hon.), OALR, 201 S. Second St., Albemarle; N. C. Med. Coll., 1904.....	1904	1910
McKenzie, Wayland Nash, GP, 320 N. Second St., Albemarle; Med. Coll. of Va., 1935.....	1935	1937
McLendon, Walter Jones, GP, Box 235, Oakboro; Med. Coll. of Va., 1941.....	1941	1947
McLeod, William Louis, GP, Main St., Norwood; Temple, 1938.....	1938	1940
Moore, Donald Bain, (Hon.), Ind. Carolina Aluminum Co., Badin; Univ. Coll. of Med., Va., 1913.....	1913	1915
Murray, Harold Lafayette, GP, Box 127, N. 2nd St., Albemarle; Emory, 1951.....	1953	1953
Outlaw, Jackson Kent, OALR, 116 W. North St., Albemarle; Syracuse Univ., 1923.....	1926	1934
Paschold, John Henry, S, Box 468, Albemarle; Western Reserve Univ., 1941.....	1950	1951
Plyler, Cranford Oliver, Jr., GP, 22 Henderson St., Badin; Geo. Wash. Univ., 1953.....	1953	1954
Ross, Willis Richard, GP, 123 N. First St., Albemarle; Med. Coll. of S. C., 1952.....	1953	1953
Shaver, William Trantham, (Hon.), S, 330 N. First St., Albemarle; Univ. of Md., 1918.....	1920	1921
Tally, Bailey Thomas, (Hon.), S, Box 231, Tally-Smith Clinic, Albemarle; Jefferson, Med. Coll., 1921.....	1921	1922
Tuttle, J. G., Albemarle; Bowman Gray, 1948.....	1949	1955
Wall, George Ritchie, GP, Hill Bldg., Albemarle; Duke, 1940.....	1940	1946

STOKES COUNTY SOCIETY

SURRY-YADKIN COUNTIES SOCIETY⁷¹

OFFICERS—President: Caldwell, Robert M., (Biog. below), Mt. Airy		
Secretary: Sykes, R. J., (Biog. below), Mt. Airy		
Abernethy, Olivia, GP, P.O. Box 390, 105 Market St., Elkin; Med. Coll. of Va., 1940.....	1940	1942
Ashby, Edward Clayton, (Hon.), S, Martin Mem. Hosp., Mt. Airy; Univ. of Penn., 1914.....	1914	1916
Beale, Seth M., GP, Box 307, Elkin; Tulane, 1935.....	1936	1938
Bell, Spencer Alexander, GP, Hamptonville; Northwestern Univ., 1935.....	1935	1938
Brandon, Henry Allen, GP, Yadkinville; Syracuse, 1935.....	1935	1940
Britt, Tilman Carlisle, Jr., GP, 216 Grace St., Mt. Airy; Bowman Gray, 1947.....	1948	1952
Caldwell, Robert Manfred, GP, 224 S. Main St., Box 387, Mt. Airy; Univ. of Va., 1936.....	1938	1940
Cooke, Ralph M., GP, P.O. Box 497, Elkin; Univ. of Louisville, 1940.....	1946	1947
Fleming, Frank Reavis, OALR, Hugh Chatham Mem. Hosp., Elkin; Jefferson, 1935.....	1935	1937
Flippin, James Meigs, (Hon.), GP, Main St., Pilot Mountain; College of P. & S., Baltimore, 1884.....	1893	1900
Franklin, Robert Benjamin Clinton, PH, 227 Rockford St., Mt. Airy; Queen's Univ., Kingston, Canada, 1931.....	1938	1940
Hall, John Moir, GP, Box 763, W. Main St., Elkin, Univ. of Va., 1942.....	1947	1947
Harding, B. H., GP, Elkin; Univ. of Va., 1934.....	1934	1935
Hughes, Carlisle Bee, Jr., S, Box 326, Yadkinville; Med. Coll. of Va., 1940.....	1951	1952
Johnson, Harry Lester, S, Chatham Memorial Hosp., Elkin; Univ. of Cinn., 1924.....	1924	1927
Lovill, Robert Jones, (Hon.), GP, Mt. Airy; Univ. of Md., 1910.....	1910	1913
Martin, Moir Saunders, (Hon.), S, Martin Memorial Hospital, Mt. Airy; Univ. Coll. of Med., Va., 1905.....	1909	1916
McLaurin, Daniel Archie, GP, USAF, Dobson; Univ. of Ga., 1949.....	1949	1951
McNeill, Claude Ackle, Jr., GP, 121 Church St., Elkin; Bowman Gray, 1943.....	1943	1948
Mitchell, Roy Colonel, (Hon.), I, Mt. Airy; Univ. of Penn., 1919.....	1921	1923
Newell, E. T., GP, Dobson; Duke, 1950.....	1953	1954
Newsome, Henry Clay, GP, Main St., Pilot Mountain; Univ. of Va., 1945.....	1945	1948
Parker, Prentiss Edward, Jr., Booneville; Tulane, 1952.....	1954	1955
Smith, Robert Edwin, OALR, 304 N. Main St., Mt. Airy; Univ. of Penn., 1923.....	1923	1926
Sutter, Renzo Humberto, Path, Cherry St., Mt. Airy; Univ. of Havana, 1938.....	1947	1948
Sykes, Charlie Louis, GP, 148 Rawley Ave., Mt. Airy; Georgetown Univ., 1938.....	1938	1939
Sykes, Ralph Judson, GP & R, 205 Rawley Ave., Mt. Airy; Med. Coll. of Va., 1934.....	1936	1936
Taylor, Vernon Williams, Jr., GP, Hugh Chatham Mem. Hosp., Elkin; Jefferson, 1938.....	1938	1941
Wood, William Lupton, GP, P.O. Box 96, Yadkinville; Bowman Gray, 1945.....	1945	1947

SWAIN—SEE JACKSON-SWAIN

TRANSYLVANIA COUNTY SOCIETY⁷²

OFFICERS—President: Boyer, Norman, (Biog. below), Pisgah Forest		
Secretary: Gunn, C. G., (Biog. below), Brevard		
Boyer, George Norman, Ind. Ecusta Paper Corp., Pisgah Forest; Bowman Gray, 1946.....	1946	1950
Corey, James Hicks, Jr., GP, U.S.A.F. Infirmary, 494 Med. Group, APO 125, New York; Univ. of Va., 1947.....	1947	1951
Gasque, Mac Roy, Ind. Ecusta Paper Corp., Pisgah Forest; Univ. of Va., 1944.....	1947	1947
Gunn, Charles G., Jr., I, Ford Eng. Staff Ind. Relations, Dearborn, Mich.; Duke, 1948.....	1952	1954
Lyday, Wilson, GP, 232 S. Caldwell St., Brevard; Emory, 1939.....	1939	1948
Newland, Charles Logan, GP, 30 W. Jordan St., Brevard; Med. Coll. of Va., 1927.....	1928	1932
Osborne, Joseph Evans, GP, Rosman; Med. Coll. of Va., 1930.....	1930	1930
Sader, Julius, GP, 15 E. Jordan St., Brevard; New York Univ., 1928.....	1938	1939
Sanders, James H., Jr., GP, 35 E. Main St., Brevard; Med. Coll. of S. C., 1951.....	1952	1953

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Stricker, Robert L., GP, 15 E. Jordan St., Brevard; Univ. of Penn.; 1941.....	1941	1946
Wilkerson, Jesse Bert, (Hon.), GP, P.O. Box 682, 12 W. Main St., Brevard; Memphis Hosp. Med. Coll., 1906.....	1923	1925

TYRRELL—SEE MARTIN—WASHINGTON—TYRRELL

UNION COUNTY SOCIETY⁷³

OFFICERS—President: Hamer, E. F., (Biog. below), Monroe		
Secretary: Ham, Clem, (Biog. below), Monroe		
Barringer, Phil Louis, S, 101 S. Hayne St., Monroe; Jefferson, 1942.....	1942	1946
Bolt, Conway Anderson, GP, Box 368, Marshville; Med. Coll. of S. C., 1926.....	1929	1930
Faulk, James Grady, S, Box 496, Monroe; Med. Coll. of Va., 1931.....	1931	1932
Garren, Robert Hall, (Hon.), OALR, Retired, Secrest Bldg., Monroe; Univ. of Nashville, 1900.....	1901	1904
Goudebeck, John Jefferies, (Hon.), GP, P.O. Box 227, 136 S. Main St., Monroe; Med. Coll. of S. C., 1923.....	1924	1924
Ham, Clem, PH, Box 23, 200 S. Hayne St., Monroe; Med. Coll. of S. C., 1926.....	1929	1930
Hamer, Eugene Floyd, GP, Box 476, Monroe; Med. Coll. of S. C., 1941.....	1941	1946
Lee, Francis Brown, S, 107 East Jefferson St., Monroe; Med. Coll. of Va., 1943.....	1951	1952
McLeod, John Purl Utley, GP, McLeod Clinic, Marshville; Coll. of Med. Evang., 1939.....	1939	1940
Neesse, Kenneth Earle, GP, 101 S. Hayne St., Monroe; Washington Univ., 1929.....	1929	1934
Oleen, George G., GP, 214 North Main St., Monroe; Univ. of Kansas, 1939.....	1946	1948
Ormand, John William, OALR, Box 397, Monroe; Univ. of Cincinnati, 1926.....	1926	1928
Phifer, William Houston, GP, 207 West Jefferson St., Monroe; Univ. of Ark., 1946.....	1949	1952
Smith, George Marvin, (Hon.), GP, Secrest Bldg., Monroe; N. C. Med. Coll., 1914.....	1914	1919
Whitt, Walter Fulton, Jr., GP, 111 South Hayne St., Monroe; Duke, 1942.....	1946	1946

VANCE COUNTY SOCIETY⁷⁴

OFFICERS—President: Wheeler, J. H., (Biog. below), Henderson		
Secretary: Tolson, J. M., (Biog. below), Henderson		
Boyd, Joseph Alston, R, 409 Chestnut St., Henderson; Med. Coll. of Va., 1945.....	1951	1952
Burwell, Walter Brodie, I, 317 Orange St., Henderson; Tulane, 1941.....	1945	1946
Coley, Elwood B., Pd, Henderson; Univ. of Penn., 1952.....	1952	1955
Fenner, Edward Ferebee, (Hon.), GP, Henderson; Univ. of Md., 1905.....	1906	1907
Mayo, Joseph Dixon, Jr., GP, 323 Chestnut St., Henderson; Univ. of Penn., 1949.....	1949	1950
Mills, Randolph Dennis, GP, 206 South Garnett St., Henderson; Wake Forest, 1951.....	1951	1952
Newcomb, Andrew Purefoy, Jr., GP, 232 Orange St., Henderson; Jefferson, 1922.....	1922	1924
Newell, Hodge Albert, (Hon.), OALR, Box 4, Henderson; P. & S. Baltimore, 1906.....	1906	1906
Noel, William Walker, S, Box 37, Professional Bldg., Henderson; Johns Hopkins, 1929.....	1939	1940
Parham, Sumner Malone, ObG, 523 South Chestnut St., Henderson; Univ. of Md., 1945.....	1945	1952
Rollins, Charles Dick, GP, 238 Orange St., Henderson; Univ. of Penn., 1935.....	1935	1939
Royster, Thomas Sampson, Jr., S, 221 Orange St., Henderson; Univ. of Penn., 1943.....	1943	1950
Tolson, James M., GP, 238 Orange St., Henderson; Bowman Gray, 1951.....	1951	1955
Wester, M. W., Jr., GP, 520 S. Chestnut St., Henderson; Duke, 1951.....	1952	1954
Wheeler, James Hartwick, (Hon.), GP, Henderson; Jefferson Med. Coll., 1918.....	1918	1920
White, Clarence Hunt, OALR, Box 257, 230 Orange St., Henderson; Tulane, 1928.....	1930	1935

WAKE COUNTY SOCIETY⁷⁵

OFFICERS—President: Judd, G. B., (Biog. below), Varina		
Secretary: Cooper, G. M., Jr., (Biog. below), Raleigh		
Alderman, A. M., Jr., GP, Bryan Bldg., Raleigh; Bowman Gray, 1946.....	1947	1952
Angstadt, Charles E., GP, 2101 Clark Ave., Raleigh; Temple Univ., 1950.....	1953	1953
Applewhite, Calvin Crawford, PH, Retired, N. C. State Bd. of Health, Raleigh; Vanderbilt, 1913.....	1949	1950
Ashby, Julian Warrington, (Hon.), PN, State Hosp., Raleigh; Univ. of Md., 1905.....	1921	1922
Ballew, James Robert, OALR, 504 Professional Bldg., Raleigh; Emory, 1940.....	1948	1949
Benson, Vladimir Basil, GP, 422 St. Mary's St., Raleigh; N. Y. Med. Coll., Flower and 5th Ave. Hosp., 1946.....	1949	1949
Bland, William Herbert, GP, Nelson Apts, Apt. 23A, Savannah, Ga.; Wake Forest, 1948.....	1949	1950
Bolus, Michael, D, 334 Professional Bldg., Raleigh; Jefferson, 1934.....	1934	1938
Branaman, Guy Hewitt, Jr., ObG, 500 St. Mary's St., Raleigh; Med. Coll. of Va., 1939.....	1947	1947
Brian, Earl Winfrey, I, 127 W. Hargett St., Raleigh; Duke Univ., 1934.....	1936	1939
Broughton, Arthur Calvin, Jr., I, 133 Fayetteville St., Raleigh; Med. Coll. of Va., 1937.....	1937	1939
Buffalo, J. S., (Hon.), GP, Garner; Baltimore Med. Coll., 1900.....	1900	1904
Bugg, Charles Richard, Pd, 627 W. Jones St., Raleigh; Johns Hopkins, 1922.....	1924	1926
Bulla, Alexander Chester, (Hon.), PH, 201 W. Davie St., Raleigh; N. C. Med. Coll., 1915.....	1915	1918
Cameron, Charles M., PH, N. C. State Bd. of Health, Raleigh; Vanderbilt, 1948.....	1953	1955
Carpentieri, Joseph, P, 2001 Clark Ave., Raleigh; Univ. of Louisville, 1943.....	1953	1953
Caveness, Zebulan Marvin, (Hon.), Pr, 116 Woodburn Rd., Raleigh; Univ. of N. C., 1903.....	1903	1903
Caviness, Verne Strudwick, I & C, 109 N. Boylan Ave., Raleigh; Jefferson, 1921.....	1921	1926
Chesson, Andrew Long, S, 223 Bryan Bldg., Raleigh; Univ. of Md., 1936.....	1936	1946
Combs, Joseph John, I, 127 W. Hargett St., Raleigh; Columbia Univ. Coll. of P. & S., 1926.....	1926	1929
Cooper, George M., Jr., ALR, 2111 Clark Ave., Raleigh; Univ. of Va., 1944.....	1945	1949
Cozart, Wiley Holt, GP, 112 Raleigh St., Fuquay Springs; Med. Coll. of Va., 1949.....	1950	1952

ROSTER OF FELLOWS

101

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Crumpler, Amos Gilmore, GP, Box 345, Fuquay Springs; Temple Univ., 1936.....	1936	1938
Dameron, Thomas B., Or, 309 Hillsboro St., Raleigh; Duke, 1953.....	1953	1954
Daniel, Tom B., U, 700 W. Morgan St., Raleigh; Bowman Gray, 1943.....	1943	1952
Dewar, William Banks, (Hon.), I, 619 Professional Bldg., Raleigh; Univ. of Penn., 1920.....	1920	1923
Dickinson, Kenneth D., ObG, 500 St. Mary's St., Raleigh; Univ. of Minn., 1932.....	1935	1936
Eastwood, Frederick Thomas, Pd, 2027 Clarke Ave., Raleigh; Temple, 1944.....	1951	1952
Egerton, Courtney, ObG, 714 St. Mary's St., Raleigh; Univ. of Louisville, Sch. of Med., 1946.....	1947	1954
Eldridge, Charles Patterson, I, Retired, 1621 St. Mary's St., Raleigh; Univ. of Penn., 1926.....	1926	1928
Elliot, Avon Hall, (Hon.), PH, State Board of Health, Raleigh; Jefferson, 1919.....	1919	1921
Estes, Marion M., P, State Hospital, Raleigh; Med. Coll. of Ga., 1943.....	1951	1953
Farley, William W., Pd, 903 W. Peace St., Raleigh; Med. Coll. of Va., 1943.....	1947	1952
Ferrell, John A., Hosp Ad, Medical Care Commission, Box 1880, Raleigh; Univ. of N. C., 1907.....	1907	1912
Finch, Ollie Edwin, (Hon.), I & GE, 133 Fayetteville St., Raleigh; Jefferson, 1915.....	1915	1917
Flowers, Charles Ely, Sr., (Hon.), GP, Box 8, Raleigh; Med. Coll., Va., 1913.....	1915	1916
Foard, Fred T., Jr., PH, State Bd. of Health, Raleigh; Univ. of Md., 1916.....	1916	1955
Fowlkes, William Mortimer, Jr., GP, Box 307, Wendell; Bowman Gray, 1944.....	1944	1947
Fox, Powell Graham, U, 302 Lands Bldg., Raleigh; Med. Coll. of Va., 1922.....	1923	1929
Galloway, James H., GP, 222 Bryan Bldg., Raleigh; Univ. of Penn., 1950.....	1950	1953
Gallup, Charles H., Anes, 2317 McMullan Circle, Raleigh; Univ. of Rochester, 1948.....	1952	1954
Gibson, Milton Reynolds, (Hon.), Retired, 105 Chamberlain St., Raleigh; Univ. of Md., 1905.....	1905	1906
Goodwin, Oscar Sexton, GP, Box 368, Apex; Jefferson, 1923.....	1923	1926
Hamilton, Alfred T., S, 309 Hillsboro St., Raleigh; Harvard, 1936.....	1945	1946
Hamilton, John Homer, PH, 214 W. Jones St., Raleigh; Harvard, 1916.....	1926	1926
Harde, Rene, Path, Rex Hospital, Raleigh; Univ. of Chicago, 1939.....	1952	1953
Harer, A. Eugene, Or, Bryan Bldg., Raleigh; Univ. of Buffalo, 1942.....	1951	1952
Hart, Lillard Franklin, GP, P.O. Box 265, Apex, Bowman Gray, 1944.....	1944	1947
Haywood, Hubert Benbury, Sr., (Hon.), I, Retired, 634 N. Blount St., Raleigh; Univ. of Penn., 1909.....	1909	1910
Haywood, Hubert B., Jr., Oph, 419 Professional Bldg., Raleigh; Duke, 1941.....	1946	1952
Herring, Edward Humphrey, S, 700 W. Morgan St., Raleigh; Univ. of Penn., 1930.....	1930	1934
Hester, Joseph Robert, (Hon.), GP, Box 157, Wendell; Univ. of N. C., 1910.....	1910	1911
Hicks, Vonnice Monroe, (Hon.), Oph, 127 W. Hargett St., Raleigh; Jefferson, 1918.....	1918	1921
Hill, Millard Daniel, GP, 15 W. Hargett St., Raleigh; Med. Coll. of Va., 1928.....	1928	1931
Hitch, Joseph Martin, D, 415 Professional Bldg., Raleigh; Univ. of Va., 1933.....	1938	1939
Horton, Miles Christopher, (Hon.), Retired, OALR, Box 137, Pine Bluff; Univ. Coll. of Med., Va., 1903.....	1911	1912
Hunt, Walter Skellie, Jr., Or, 309 Hillsboro St., Raleigh; Northwestern Univ., 1939.....	1939	1948
Hunter, John Pullen, (Hon.), GP, Box 94, Cary; Jefferson Med. Coll., 1919.....	1919	1921
Jenkins, Albert M., R, 227 Bryan Bldg., Raleigh; Univ. of Cinn., 1947.....	1953	1953
Jeter, R. Vernon, GP, Plymouth Clinic, Plymouth; Duke, 1952.....	1952	1955
Jones, Carey Celester, (Hon.), GP, Apex; Jefferson Med. Coll., 1920.....	1920	1923
Judd, Glenn Ballentine, GP, Varina; Vanderbilt Univ., 1932.....	1934	1935
Kermon, Louis Todd, I, 17 S. Boylan Ave., Raleigh; Jefferson, 1950.....	1950	1952
Kistler, Clark C., GP, 502 St. Mary's St., Raleigh; Bowman Gray, 1947.....	1948	1949
Kitchin, Thurman D., (Hon.), Ed, Retired, Wake Forest College, Wake Forest; Jefferson, 1908.....	1908	1908
Kleiman, David, I, 2006 Fairview Road, Raleigh; Coll. of Med., Univ. of Ill., 1934.....	1946	1946
Lane, Bessie Evans, I, Caswell Training School, Kinston; Woman's Med. Coll. of Penn., 1921.....	1921	1926
Lawrence, Benjamin Jones, (Hon.), S, 127 W. Hargett St., Raleigh; Jefferson, 1918.....	1918	1919
Lawrence, Benjamin Jones, Jr., S, 503 Professional Bldg., Raleigh; Jefferson, 1947.....	1947	1948
Lewis, Sigma Van, GP, Garner; Med. Coll. of Va., 1916.....	1916	1923
Liles, Lonnie Carl, GP, 707 Professional Bldg., Raleigh; Med. Coll. of Va., 1930.....	1930	1933
Long, William Lunsford, Jr., I, 2103 Clarke Ave., Raleigh; Univ. of Va., 1943.....	1948	1949
Mackie, George Carlyle, GP, Box 927, 340 N. Main St., Wake Forest; Univ. of Penn., 1928.....	1928	1932
Manly, Isaac, S, 2021 Clark Ave., Raleigh; Harvard, 1946.....	1946	1955
Martin, Thomas Adrian, Oph, 2811 Hillsboro St., Raleigh; Univ. of Md., 1931.....	1939	1941
Martin, William James, GP, 815 Newbern Ave., Raleigh; Chicago Med. Sch., 1939.....	1950	1952
McCauley, Elizabeth, Pd, 226 Bryan Bldg., Raleigh; Univ. of Md., 1948.....	1952	1952
McElrath, Percy John, ObG, 500 St. Mary's St., Raleigh; Med. Coll. of Va., 1941.....	1949	1949
McInnis, Alice Pugh, Pd, 502 St. Mary's St., Raleigh; Bowman Gray, 1947.....	1948	1952
McManus, Hugh Forrest, Jr., GP, 722 St. Mary's St., Raleigh; Med. Coll. of S. C., 1938.....	1938	1941
Merritt, Joseph E., Jr., I, 615 St. Mary's St., Raleigh; Univ. of Chicago, 1942.....	1951	1952
Moore, James L., Or, 821 Hillsboro St., Raleigh; Jefferson, 1944.....	1944	1950
Morcy, Madeleine E., P & PH, Children's Bureau, 69 W. Wash. St., Chicago 2, Ill.; New York Med. Coll., Flower and 5th Ave. Hosp., 1947.....	1953	1953
Neal, J. Walter, S, 309 Hillsboro St., Raleigh; Tulane, 1932.....	1934	1935
Neal, Kemp Prather, (Hon.), S, Retired, Box 1231, Myrtle Beach, S. C.; Harvard, 1917.....	1920	1921
Noble, Robert Primrose, (Hon.), R, 518 Professional Bldg., Raleigh; University of North Carolina, 1907.....	1907	1908

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Norton, John W. Roy, PH, N. C. State Board of Health, Raleigh; Vanderbilt, 1928.....	1928	1932
Ogburn, L. N., GP, 116 Woodburn Rd., Raleigh; Temple, 1941.....	1941	1954
Oliver, Adlai Stevenson, (Hon.), ObG, 423 Daniels St., Raleigh; Jefferson, 1914.....	1914	1919
Oliver, Jim Upton, ObG, 211 Bryan Bldg., Raleigh; Jefferson Med. Coll., 1947.....	1947	1953
Owen, John Fletcher, P, 511 Prof. Bldg., Raleigh; Jefferson Med. Coll., 1920.....	1920	1927
Page, Ernest B., Jr., I, 2005 Clark Avenue, Raleigh; Duke, 1948.....	1953	1955
Paschal, George Washington, Jr., S, 311 Lands Bldg., Raleigh; Jefferson Med. Coll., 1931.....	1931	1946
Payne, E. Louise, ObG, 789 Howard Ave., New Haven 4, Conn.; Woman's Med. Coll. of Penn., 1942.....	1942	1945
Pizer, Morton E., Pd, 2019 Clark Ave., Raleigh; UNC & Louisville, 1947.....	1948	1953
Plonk, George W., S & G, Professional Bldg., Raleigh; Jefferson Med. Coll., 1944.....	1945	1953
Powers, Frank Poydras, OALR, 704 Professional Bldg., Raleigh; Univ. of Penn., 1927..	1927	1928
Pritchett, Newton George, I, 2029 Clark Ave., Raleigh; Dalhousie Med. Sch., 1943.....	1953	1953
Procter, Ivan Marriott, (Hon.), ObG, Retired, 209 Hillcrest Rd., Raleigh; Univ. of Penn., 1915.....	1915	1917
Reynolds, Carl Vernon, (Hon.), PH & T, 1100 New York Dr., Altadena, California; Univ. of N. Y., 1895.....	1895	1896
Rhodes, John Sloan, U, 700 W. Morgan St., Raleigh; Harvard, 1929.....	1929	1936
Root, Aldert Smedes, (Hon.), Pd, 2300 White Oak Road, Raleigh; Univ. of Penn., 1911	1911	1913
Royster, Chauncey Lake, I, 707 West Morgan St., Raleigh; Cornell Univ., 1935.....	1935	1941
Royster, Hubert Ashley, (Hon.), S, 2318 Beechridge Rd., Raleigh; Univ. of Penn., 1894	1894	1895
Ruark, Robert James, ObG, 714 St. Mary's St., Raleigh; Univ. of Penn., 1931.....	1931	1934
Saleeby, Richard G., S & Pr, 224 Hillsboro St., Raleigh; Jefferson, 1946.....	1947	1955
Sanders, Lee Hyman, Pd, 627 W. Jones St., Raleigh; Temple, 1942.....	1942	1946
Senter, William Jeffress, I, 702 W. Jones St., Raleigh; Univ. of Md., 1942.....	1942	1949
Simpson, Paul Ervin, ObG, 2115 Clark Ave., Raleigh; Duke, 1940.....	1945	1947
Sinclair, Lewis Gordon, S, 336 Professional Bldg., Raleigh; Univ. of Penn., 1933.....	1933	1939
Smith, Sidney S., Jr., U, 127 West Hargett St., Raleigh; Tulane Univ., 1925.....	1925	1930
Smith, William Alexander, PH & T, N. C. Board of Health, Raleigh; Univ. of Penn., 1916	1916	1949
Styron, Charles Woodrow, I, 615 St. Mary's St., Raleigh; Duke, 1938.....	1946	1946
Thomas, Ben D., GP, Zebulon; Med. Coll. of S. C., 1944.....	1946	1947
Thompson, Hugh Alexander, (Hon.), Or, 309 Hillsboro St., Raleigh; Univ. of Penn., 1914	1914	1917
Thompson, William Nelson, GP, 724 St. Mary's St., Raleigh; Boston Univ., 1939.....	1940	1940
Thornhill, Edwin Hale, OALR, 720 Jones St., Raleigh; Duke Univ., 1938.....	1941	1942
Thornhill, George Tudor, OALR, 720 W. Jones St., Raleigh; Duke Univ., 1941.....	1949	1950
Turner, Henry Gray, (Hon.), Retired, S. Point Harbor; Univ. of Penn., 1906.....	1907	1910
Umphlet, Thomas Leonard, I, 119 North Boylan Ave., Raleigh; Univ. of Penn., 1934.....	1934	1939
Valone, James Austin, Pl, 2107 Clarke Ave., Raleigh; Univ. of Buffalo, 1936.....	1937	1954
Wall, Roger Irving, OALR, 329 Professional Bldg., Raleigh; Tulane Univ., 1934.....	1934	1937
Ward, Wallace Clyde, GP, 231 Bryan Bldg., Raleigh; Univ. of Louisville, 1931.....	1931	1934
Ward, William Titus, GP, 304 Professional Bldg., Raleigh; Univ. of Md., 1925.....	1925	1927
Weathers, Rupert Ryan, GP, Box 187, Knightdale; Med. Coll. of Va., 1926.....	1926	1928
Webb, Alexander, Jr., S, 221 Bryan Bldg., Cameron Village, Raleigh; Harvard, 1937....	1940	1941
West, Louis Nelson, (Hon.), OALR, Holly Hill, Raleigh; Jefferson Med. Coll., 1912.....	1912	1915
Whitaker, Donald N., GP, 700 W. Morgan St., Raleigh; Temple Univ., 1940.....	1940	1946
Wilkerson, Annie Louise, ObG, 100 S. Boylan Ave., Raleigh; Med. Coll. of Va., 1938....	1938	1939
Wilkerson, Charles B., Jr., I, 100 S. Boylan Ave., Raleigh; Med. Coll. of Va., 1944.....	1944	1945
Wilkinson, Charles Tolbert, (Hon.), GP, Wilkinson Bldg., Wake Forest; Tulane, 1922....	1922	1924
Wilkinson, James Spencer, D, 618 Professional Bldg., Raleigh; Univ. of Penn., 1938....	1938	1940
Wilkinson, Robert Watson, Jr., (Hon.), GP, Box 409, Wake Forest; Tulane, 1922.....	1923	1924
Willett, Robert W., I, 2005 Clark Avenue, Raleigh; Duke, 1948.....	1953	1955
Williams, Charles Frederick, Pd, 817 Hillsboro St., Raleigh; Jefferson Med. Coll., 1934	1934	1937
Williams, Robert, R, 127 W. Hargett St., Raleigh; Univ. of Penn., 1935.....	1935	1946
Wilson, Margaret, S, 510 Professional Bldg., Raleigh; Duke, 1943.....	1947	1952
Wilson, Thomas Barnette, Path & CP, Rex Hospital, Raleigh; N. Y. Med. Coll., Flower and Fifth Ave. Coll., 1936.....	1946	1946
Wilson, Walter Howard, I, 403 Professional Bldg., Raleigh; Jefferson, 1937.....	1937	1946
Withers, William Alphonso, I, 16 N. Dawson St., Raleigh; Rush Med. Coll., 1936.....	1937	1946
Wooten, Jane Herring, Pd, 817 Hillsboro, Raleigh; Duke, 1942.....	1944	1946
Worth, Thomas Clarkson, R, Rex Hospital, Raleigh; Harvard, 1936.....	1936	1949
Wright, Isaac C., I, 119 N. Boylan Ave., Raleigh; Univ. of Md., 1944.....	1945	1950
Wright, James Rhodes, OALR, 604 Prof. Bldg., Raleigh; Univ. of Md., 1940.....	1940	1940
Wright, John Bryan, (Hon.), ALR, 604 Professional Bldg., Raleigh; Univ. Coll. of Med., Richmond, 1899.....	1899	1900
Yarborough, Frank Ray, GP, Box 398, 105 E. Park St., Cary; Univ. of Penn., 1924.....	1924	1926
Young, David Alexander, PN, 714 St. Mary's St., Raleigh; Harvard, 1931.....	1931	1946

WARREN COUNTY SOCIETY⁷⁶

OFFICERS—President: Kornegay, L. M., (Biog. below), Warrenton

Secretary: Foster, H. H., (Biog. below), Norlina

Adams, Powell Evans, GP, Norlina; Univ. of Penn., 1951.....	1954	1955
Foster, Howitt Hodge, (Hon.), GP, Box 205, Norlina; Jefferson Med. Coll., 1919.....	1919	1923
Holt, Thomas, OALR, Warrenton; Med. Coll. of Va., 1938.....	1938	1948
Holt, Thomas Jefferson, (Hon.), GP, (Retired), Warrenton; Med. Coll. of Va., 1904....	1904	1911
Hunter, Frank Patterson, GP, Box 647, Hunter Clinic, Warrenton; Univ. of Va., 1925.....	1925	1927

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Huntley, Robert Ross, GP, Box 707, Warrenton; Bowman Gray, 1951.....	1951	1954
Kornegay, Lemuel Weyher, S, Warrenton; Duke, 1943.....	1943	1943
Peete, Charles Henry, (Hon.), GP, Warrenton; Univ. of Penn., 1903.....	1906	1906
Rodgers, William Daniel, (Hon.), GP, Warrenton; Jefferson Med. Coll., 1913.....	1913	1915

WASHINGTON—SEE MARTIN-WASHINGTON-TYRRELL

WAYNE COUNTY SOCIETY⁷⁷

OFFICERS—President: Miller, W. H., Jr., (Biog. below), Goldsboro		
Secretary: Compton, J. W., (Biog. below), Goldsboro		
Abbott, Robert W., P, State Hospital, Goldsboro; Tufts, 1940.....	1949	1950
Benton, George Ruffin, Jr., S & G, 816 E. Ash St., Goldsboro; Univ. of Penn., 1934.....	1935	1938
Best, Deleon Edward, GP, 139 W. Walnut St., Goldsboro; Univ. of Md., 1924.....	1924	1926
Bizzell, James W., Oph, 314 Borden Bldg., Box 711, Goldsboro; Univ. of Md., 1943.....	1943	1947
Bizzell, Marcus Edward, (Hon.), OALR, Box 35, Goldsboro; Tulane Univ., 1923.....	1923	1925
Clark, Milton Stephen, GP, 139 W. Walnut St., Goldsboro; Emory, 1937.....	1937	1939
Cobb, Donnell Borden, S, 401 N. Herman St., Goldsboro; Univ. of Penn., 1921.....	1921	1926
Compton, John W., R. Bank of Wayne Bldg., Goldsboro; Med. Coll. of Va., 1945.....	1952	1953
Cook, John S., Jr., Hosp. Res. Bluefield Sanitarium, Bluefield, Va.; Duke, 1950.....	1954	1955
Corkey, Elizabeth Moon Conard, PH, Mecklenburg Co. Health Dept., Charlotte; Univ. of Mich., 1929.....	1948	1949
Crawford, William Jennings, (Hon.), U. Bank of Wayne Bldg., Goldsboro; Med. Coll. of Va., 1922.....	1922	1923
Crumpler, Warren Harding, GP, Center St., Mt. Olive; Bowman Gray, 1943.....	1943	1947
Dale, Grover Cleveland, GP, c/o Wayne Bank Bldg., Goldsboro; Univ. of Penn., 1925.....	1925	1927
Etherington, John L., OALR, Wayne Bank Bldg., Goldsboro; Queens Univ., Kingston, Canada, 1936.....	1946	1947
Finck, Pierre Antoine, Path, 809 East Ash St., Goldsboro; Univ. of Geneva, Switzerland, 1948.....	1954	1954
Henderson, Clari Crouse, (Hon.), GP, Center St., Mt. Olive; Univ. of Md., 1914.....	1914	1919
Howard, Corbett Etheridge, R, Box 664, Goldsboro; Univ. of Penn., 1925.....	1925	1927
Irwin, Henderson, (Hon.), GP, Box 26, Eureka; Univ. of Md., 1912.....	1914	1916
Kyles, Norman Bruce, PN, State Hospital, Goldsboro; Univ. of Toronto, 1926.....	1948	1949
Lownes, Milton M., Jr., P, N. Center St., Mt. Olive; Univ. of Louisville, 1947.....	1951	1952
†McCuiston, Allen Masten, (Hon.), GP, 101 E. James St., Mt. Olive; N. C. Medical College, 1911.....	1911	1917
McLeod, John C., Jr., I, 811 Simmons St., Goldsboro; Tulane, 1941.....	1948	1949
McPheeters, Samuel Brown, PH, Health Center, Goldsboro; Washington Univ., 1906.....	1933	1934
Miller, Walton H., Jr., S, 816 E. Ash St., Goldsboro; Univ. of Cinn., 1940.....	1940	1948
Pate, Archibald Hanes, Pd, 1008 E. Ashe St., Goldsboro; Duke Univ., 1937.....	1939	1941
Pate, William Henry, GP, Pikeville; Med. Coll. of Va., 1948.....	1949	1950
Powell, Eppie Charles, Jr., ObG, 1008 E. Ash St., Goldsboro; Univ. of Penn., 1935.....	1935	1937
Rand, Cecil Holmes, GP, Main Street, Fremont; Univ. of Penn., 1926.....	1926	1928
Rose, James William, GP, Pikeville; Tulane, 1928.....	1928	1931
Shackelford, Robert, GP, W. Main St., Mt. Olive; Bowman Gray, 1947.....	1948	1950
Smith, A. Parker, GP, P.O. Box 216, Fremont; Johns Hopkins, 1945.....	1948	1952
Smith, William Carey, GP, Bank of Wayne Bldg., Goldsboro; Univ. of Md., 1936.....	1936	1938
Strosnider, Charles Franklin, (Hon.), I, 111 E. Chestnut St., Goldsboro; University of Maryland, 1909.....	1910	1913
Thompson, Winfield Lynn, S, 809 Simmons St., Goldsboro; Univ. of Md., 1938.....	1938	1946
Trachtenberg, William, GP, Borden Bldg., Goldsboro; Duke, 1939.....	1946	1947
Warrick, Luby Albert, (Hon.), GP, Grantham Village, Goldsboro; Geo. Washington Univ., 1923.....	1923	1924
Wilkens, Kenneth, ObG, 210 N. Herman St., Goldsboro; Univ. of Maryland, 1945.....	1945	1948
Wolfe, Harold Eugene, D, Box 864, 137 W. Walnut St., Goldsboro; Med. Coll. of Va., 1943.....	1946	1946
Woodard, Albert Gideon, (Hon.), Oph, Box 423, Goldsboro; Univ. of N. C., 1907.....	1907	1909
Zealy, Albert Hazel, Jr., GP, Borden Bldg., 3rd Floor, Goldsboro; Harvard, 1930.....	1932	1934

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Secretary: Landon, H. C., III, (Biog. below), N. Wilkesboro		
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Bumgarner, James, GP, Millers Creek; Bowman Gray, 1950.....	1953	1954
Bundy, William Lumsden, I, N. Wilkesboro; Vanderbilt Univ., 1936.....	1936	1940
Hawkins, Hal B., GP, Moravian Falls; Western Reserve, 1953.....	1953	1955
Hayes, William Clayton, GP, USAFMC, 31st Fighter Sqdn. Hosp. Division, Turner AFB, Albany, Ga.; Bowman Gray, 1947.....	1948	1950
Hubbard, Frederick Cecil, (Hon.), S, Box 36, N. Wilkesboro; Jefferson, 1918.....	1919	1924
Landon, Henry Clayton, III, GP, 821 B. Street, N. Wilkesboro; Univ. of Va., 1947.....	1949	1950
Lewis, Robert Edward, S, Doctors Office Bldg., N. Wilkesboro; Jefferson, 1944.....	1944	1946
McNeill, James Hubert, I, Box 481, 408 Eighth Street, N. Wilkesboro; George Washington University, 1926.....	1926	1927
McNiel, Thomas Lee, GP, Eighth St., N. Wilkesboro; Bowman Gray, 1947.....	1948	1955
Miles, Walter W., GP, Route 1, Wilkesboro; Univ. of Tenn., 1931.....	1933	1934

†Deceased

<i>Name and Address</i>	<i>Licensed</i>	<i>Joined State Society</i>
Mills, James Cobb, GP, 314 C at 4th St., N. Wilkesboro; Tulane, 1942.....	1946	1946
Mordecai, Alfred, PH, Wilkes Co. Health Center, Wilkesboro; Univ. of Md., 1914.....	1914	1945
Newton, William King, OALR, Box 191, N. Wilkesboro; Med. Coll. of Va., 1931.....	1932	1933
Phillips, Ernest Nicholas, GP, 100 B Street, N. Wilkesboro; Med. Coll. of Va., 1930.....	1930	1935
Sink, Charles Shelton, (Hon.), GP, Box 607, N. Wilkesboro; N. C. Med. Coll., 1912.....	1912	1913
Smith, Harold Benjamin, GP, 113 9th St., P.O. Box 308, N. Wilkesboro; Med. Coll. of S. C., 1929.....	1929	1930
Stringfield, Preston Calvin, Jr., I, Wilkes Hosp., N. Wilkesboro; Bowman Gray, 1943.....	1944	1949
Thompson, Clive Allen, GP, Sparta; Med. Coll. of Va., 1924.....	1924	1936
Triplett, William Romulus, (Hon.), GP, Purlear; N. C. Med. Coll., 1914.....	1915	1920
Willis, Tom Vann, S. Alleghany Co. Mem. Hosp., Sparta; Emory, 1926.....	1945	1951

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Secretary: Newell, Josephine E., (Biog. below), Bailey		
Alexander, William M., T, ENC Sanatorium, Wilson; Med. Coll. of S. C., 1945.....	1949	1954
Beddingfield, Edgar Theodore, Jr., GP, Box 137, Stantonburg; Harvard, 1948.....	1948	1951
Bell, George Erick, (Hon.), GP, Wilson Clinic, Wilson; Jefferson, 1921.....	1921	1922
Blackshear, Thomas Joseph, Jr., (Hon.), OALR, National Bank Bldg., Wilson; Emory, 1914.....	1923	1924
†Bradshaw, Thomas Gavin, GP, RFD 2, Wilson; Med. Coll. of Va., 1909.....	1924	1924
Brooks, Harry Eskridge, GP, ENC Sanatorium, Wilson; Med. Coll. of Va., 1917.....	1917	1923
Clark, Badie Travis, S, 103 N. Pine St., Wilson; Univ. of Ga., 1930.....	1934	1935
Cubberley, Charles Lamb, Jr., GP, Box 1471, Gold Prof. Bldg., Wilson; Jefferson, 1940.....	1947	1947
Eagles, Charles Sidney, (Hon.), GP, Retired, Box 35, Saratoga; Univ. of N. C., 1909.....	1909	1910
Eason, Herman Franklin, T, Eastern N. C. Sanatorium, Wilson; George Washington University, 1927.....	1927	1929
Fike, Ralph Llewellyn, GP, Wilson Clinic, Wilson; Med. Coll. of S. C., 1932.....	1933	1934
Fleming, Samuel Wallace, GP, Elm City; Kansas City Coll. of P. & S., 1941.....	1950	1954
Foster, Houston G., T, 203 N. Pine St., Wilson; Univ. of Penn., 1927.....	1951	1953
Goodwin, Cleon Walton, S, Wilson Clinic, Wilson; Univ. of Penn., 1934.....	1934	1940
Gouldin, John Milton, III, GP, Elm City; Med. Coll. of Va., 1944.....	1948	1948
Herring, T. Tilghman, S, Wilson Clinic, Wilson; Johns Hopkins, 1938.....	1938	1941
Hunter, William Cooper, I, 103 N. Pine St., Wilson; Univ. of Penn., 1928.....	1928	1931
Jones, William Robert, GP, Eastern N. C. Sanatorium, Wilson; Bowman Gray, 1947.....	1948	1954
Kerr, Joseph T., S, 103 N. Pine St., Wilson; Jefferson, 1935.....	1935	1940
Meadows, Joseph Herman, OALR, National Bank Bldg., Wilson; Med. Coll. of Va., 1934.....	1934	1947
Melchior, George W., ObG, Melchior Clinic, Wilson; Med. Coll. of Va., 1942.....	1948	1948
Melchior, Josephine Trevvett, Pd, 400 W. Nash St., Wilson; Med. Coll. of Va., 1942.....	1948	1949
Mitchell, George William, (Hon.), GP, First National Bank Bldg., Wilson; Univ. of Med., Richmond, 1913.....	1913	1914
Morgan, Benjamin Edward, GP, Eastern N. C. Sanatorium, Wilson; Bowman Gray, 1947.....	1948	1954
Newell, Josephine Evelyn, GP, Box 208, Bailey; Univ. of Maryland, 1949.....	1949	1951
Noblin, Frances E., T, Eastern Carolina Sanatorium, Wilson; Med. Coll. of Va., 1936.....	1950	1951
Pittman, Malory Alfred, S, Wilson Clinic, Wilson; Jefferson Med. Coll., 1921.....	1924	1927
Pope, Robert Clyde, Pd, Wilson Clinic, Wilson; Bowman Gray, 1945.....	1945	1951
Putney, Robert Hubbard, Jr., GP, Elm City; Med. Coll. of Va., 1943.....	1943	1946
Rasberry, Edwin Albert, Jr., I, Woodard Herring Hosp., Wilson; Univ. of Penn., 1941.....	1941	1948
Simons, Claude Ernest, GP, Carolina General Hosp., Wilson; Med. Coll. of Va., 1930.....	1930	1935
Smith, Anderson Jones, (Hon.), GP, Retired, Box 83, Black Creek; Univ. of Penn., 1921.....	1921	1923
Smith, M. Jean, ObG, 400 W. Nash St., Wilson; Univ. of Tenn., Med. Coll., 1949.....	1954	1955
Spencer, William Gear, Jr., Ob, Wilson Clinic, Wilson; Johns Hopkins, 1944.....	1950	1951
Strickland, Ernest Lee, (Hon.), GP, 103 North Pine St., Wilson; Med. Coll. of Va., 1916.....	1916	1917
Willis, Harry Clay, (Hon.), OALR, Wilson; Coll. of P. & S., Memphis, 1911.....	1916	1924
Wright, John Everett, GP, Eastern N. C. Sanatorium, Wilson; Jefferson, 1937.....	1937	1938
Young, William B., I, Carolina General Hospital, Wilson; Emory Univ., 1948.....	1952	1955

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Wade Hampton Braddy	Burlington
Catherine Creighton Carr	Biltmore Forest
Edward Graham Clifton	Louisburg
Roland Smith Clinton	Gastonia
Thomas Morris Copple	Greensboro
John B. Cranmer	Wilmington
Rigdon Osmond Dees	Greensboro
James A. Dimmette	Gastonia
Vernon Lyndon Eley	Hiddenite
Stuart Graves	Blowing Rock
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F. M. Greer	Mabel
Daniel W. Gunn	Cherokee
Leon J. Harrell	Goldsboro
William Horace Harrell	Creswell
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James Franklin Johnston	Asheville
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Donald Munro McIntosh, Jr.	Marion
Thomas S. McMullan	Elizabeth City
Vann Marshall Matthews	Charlotte
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John Burton Nowlin	Charlotte
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Earl E. Pittman	Virginia Beach, Virginia
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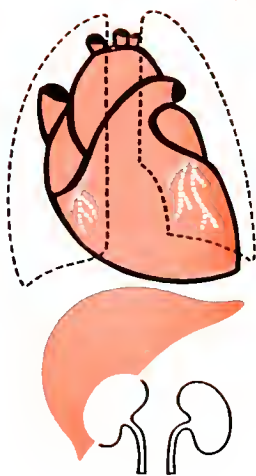
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THE PROBABLE INFLUENCE OF SALK POLIOMYELITIS VACCINE ON REPORTED POLIOMYELITIS IN NORTH CAROLINA

BERNARD G. GREENBERG, B.S., Ph.D.*

and

CHARLES M. CAMERON, JR., M.D., M.P.H.**

CHAPEL HILL

Poliomyelitis control activities in the United States have been both enhanced and hampered by the grave concern with which most persons regard this disease. Dread of poliomyelitis has spurred community mobilization almost overnight for the staging of such emergency control activities as gamma globulin clinics, insecticide spraying, and "clean-up" campaigns, and also has resulted in the contribution of millions of dollars annually to support poliomyelitis research, hospitalization, and prevention.

In the light of this attitude, there should be little surprise that each new development in the long conquest of this disease is seized upon with great public acclaim as *the* one single measure which may result in its eradication. That this reasoning is a mixed blessing has been pointed out by a few medical authorities who have insisted that the decision to launch the mass application of any control measure must be arrived at by medical and scientific authorities only. Some have suggested that much of the confusion attendant to the use of the Salk poliomyelitis vaccine in the United States in 1955 could have been averted had the vaccine and its limitations been scrutinized longer in the light of unemotional scientific reasoning⁽¹⁾.

Whether American communities should continue the use of the Salk vaccine, perhaps in the face of a rising incidence of poliomyelitis, has been debated hotly in scientific forums and legislative chambers throughout

the land. Strangely lacking from such discussions has been any great consideration as to the possible influence of the vaccine on the reported poliomyelitis cases of any given geographic unit.

To determine the possible effect of the use of the Salk vaccine in North Carolina, this special study has been conducted. It is based upon official records of poliomyelitis reports in the files of the Division of Epidemiology of the North Carolina State Board of Health, and upon the report of Dr. Thomas Francis of the University of Michigan as to the 1954 field trial of the Salk vaccine⁽²⁾. From the former an attempt has been made to predict, within certain limits, the total number of reported poliomyelitis cases, paralytic and nonparalytic, which might be expected in the state, and from the latter, what influence the use of the vaccine will have on the anticipated incidence of poliomyelitis.

Difficulties in Evaluating the Vaccine

The lack of uniform agreement as to the reported effectiveness of the vaccine has caused considerable public comment. The report of "80 to 90 per cent effective" apparently received the widest publicity through the nation's news services, since this is the most widely quoted figure. It is unfortunate that the necessary qualification that this percentage pertains only to "virus positive paralytic poliomyelitis" was omitted.

Sight has been lost also of the fact that poliomyelitis is a disease with a wide clinical horizon ranging from virtually asymptomatic infections to severe paralysis and death. This insures that each year many cases in the population are missed entirely,

*Professor of Biostatistics, School of Public Health, University of North Carolina.

**Associate Professor of Public Health Administration, School of Public Health, University of North Carolina and former Chief, Communicable Disease Control Section, Division of Epidemiology, N. C. State Board of Health.

Table 1
 Predicted Incidence of Poliomyelitis, All types and Paralytic, in North Carolina,
 Based on Low, Average and High Incidence Years, in 1955.

Age (years)	Expected number of reported cases poliomyelitis — All types					Expected # cases para. polio.		
	Estimated 1955 population*	Average rate per 100,000** 1950-1954	'Low' year	'Average' year	'High' year	'Low' year	'Average' year	'High' year
Under 1	115,878	24.3	19	28	41	13	18	26
1-2	110,210	39.3	26	43	70	20	32	51
2-3	107,410	41.3	26	44	73	20	32	52
3-4	106,381	44.5	28	47	79	19	33	57
4-5	104,281	45.4	27	47	82	15	26	44
5-6	98,285	38.1	23	37	59	13	20	32
6-7	103,985	43.7	28	45	72	15	24	38
7-8	113,650	33.6	26	38	57	13	19	28
8-9	116,688	32.8	29	38	50	14	18	24
9-10	99,759	35.0	28	35	43	14	17	20
10-11	93,419	34.9	24	33	45	10	16	25
11-12	93,399	32.3	22	30	41	11	14	18
12-13	92,224	19.2	8	18	41	5	11	24
13-14	89,353	18.9	8	17	35	4	9	19
14-15	83,141	17.4	7	14	29	3	7	14
15-16								
16-17								
17-18	305,755	15.6	32	48	73	16	23	33
18-19								
19-20								
20 and over	2,074,077	3.3	48	68	97	21	31	46
Total	3,907,895	16.12	409	630	987	226	350	551

*Includes only resident civilian population. The population estimates were provided by Dr. Daniel Price, Director, Social Science Research Laboratory, University of North Carolina.

**Source—North Carolina State Board of Health

and that a substantial number are misdiagnosed. For this reason, in practice other than a research oriented study, any large series of poliomyelitis reports will contain some cases which are not poliomyelitis, while some cases of poliomyelitis will be reported as other conditions. This situation is compounded by the lack of any single, economical test to establish or rule out poliomyelitis infection definitely. This problem is particularly significant in the case of the Salk vaccine, however, because its impact will be judged on its effect upon the total number of cases reported by physicians as poliomyelitis. Among the age groups studied the effectiveness of the vaccine in all cases reported as poliomyelitis is given in the Francis report as 49 per cent. This figure most realistically approaches what may be expected of the vaccine with regard to what the public and health authorities recognize as poliomyelitis in official reports, and indicates that among a group of vaccinated persons, 49 per cent are expected to be protected against the disease during the first year.

Judging the effectiveness of vaccination is further complicated by the finding that the Salk vaccine imparted no protection against nonparalytic infections. When one considers its usefulness against paralytic poliomyelitis only, the figure is 72 per cent, and it is only when one looks at the experience of the test subjects in the field trial in relation to the specific type of virus which caused their disease that one finds a suggestion of effectiveness approaching 80 or 90 per cent. Here again, however, a qualification must be made in the interest of strict impartiality in interpreting the results, since the numbers of cases upon which these calculations are based were very small. The Francis report itself contains such a qualification: "The estimate would have been more secure had a larger number of cases been available."

Predicted Incidence in North Carolina

Based on the poliomyelitis experience of North Carolina during the five-year period 1950-54, table 1 shows the number of cases of poliomyelitis which can be predicted to

Table 2
Influence of Salk Vaccine on Predicted Incidence of Poliomyelitis, North Carolina, 1955, by Percentage of Total Population Vaccinated.

Percentage of population vaccinated	Expected number of reported cases all types poliomyelitis			Expected number of reported cases paralytic poliomyelitis		
	"Low" year	"Average" year	"High" year	"Low" year	"Average" year	"High" year
0	409	630	987	226	350	551
25	359	553	866	185	287	452
50	309	476	745	145	224	353
75	259	398	624	104	161	253
100	209	321	503	63	98	154

occur in each age group. Such prediction shows not only a so-called "average" year, but also presents the range in terms of a "low" incidence year and a "high" incidence year. From this table one may note that in an average year there will occur in North Carolina a total of 630 reported cases of poliomyelitis of all types. Of this number, 350 are expected to manifest some degree of paralysis. In a low incidence year, one may expect 409 cases of all types, of which 226 are paralytic. During a high incidence year, 987 cases are predicted, of which 551 will be paralytic.

One may observe from this table that in North Carolina the highest attack rates during the five-year period 1950-1954 were experienced by children from 1 through 4 years of age. This finding forebodes a troublesome problem in the control of poliomyelitis in North Carolina, because the 1954 field trials showed that the vaccine was less effective at the younger age levels. Quoting from page 39 of the Francis report: "Thus there appears to be a progressive increase in the protective effect as age increases. Since the difference in attack rate between vaccinated and control six year olds is not statistically significant, a question might be raised as to how and why this group differed from the older children." This means that the most numerous and the most seriously affected age groups in North Carolina cannot look toward the present vaccine for any protection.

Other information obtained from the present study and based upon disposition diagnoses of poliomyelitis cases from 1952-1954 showed that of the total cases reported among children under 4 years of age, almost 75 per cent represented paralytic forms of the disease. Beyond the age of 5, about 50 per cent of the reported cases were classed as paralytic infections in the final diagnosis.

Expected Influence of the Salk Vaccine

What influence will the Salk vaccine have on these predicted cases of poliomyelitis? Table 2 shows the number of cases which may be expected if the vaccine is used on varying segments of the population. The 630 cases of all types which might be expected in the average year would be reduced to 321 if every person in the state had received a complete immunization with the Salk product and if the effectiveness were the same in all age groups as those studied in the 1954 field trial.* If only half the population receive complete immunization, the expected 630 cases would be reduced to 476 cases. That these reductions are not more pronounced is a reflection of the inherent limitations of the vaccine.

In like manner, the 350 paralytic cases which are anticipated during the average year could be reduced to 98 if 100 per cent of the population were successfully inoculated. These estimates are based on the Francis report findings that the vaccine is 49 per cent effective against all types of poliomyelitis, not effective against nonparalytic poliomyelitis, and 72 per cent effective against paralytic poliomyelitis.

Much controversy has been centered in the continuance of the National Foundation of Infantile Paralysis sponsored program of inoculations for first and second grade school children. A recent survey by the North Carolina State Board of Health showed that, despite the assurance from the N.F.I.P. Professional Advisory Committee, less than half the counties in the state plan to offer second inoculations prior to the opening of school, and early reports from counties offering vaccine indicate that from one-fourth to one-third of the eligible children have responded to the invitation to a second dose of vaccine.

*Including 8,577 children who received one or two injections of placebo.

The use of Salk vaccine among all school children in these two grades only would reduce the 630 cases of all types of poliomyelitis expected in the average year to 576, the high figure of 987 to 914, and the low figure from 409 to 368. The 54 cases of paralytic polio expected in these age groups in an average year could be reduced as low as 15 if every first and second grader received the vaccine. Therefore, this would reduce the total number of paralytic cases expected in the average year from 350 to 311.

All these predictions as to the usefulness of the vaccine presuppose in addition that the inoculation schedule of two injections several weeks apart followed in several months by a booster injection will be as effective as the three-injection method adhered to during the field trial of last year. That this modification, necessary to stretch the short supply of vaccine in 1955, will give results equal to those previously observed is a question which can be answered accurately only after a large number of children have been inoculated and observed for many months, despite the assurances of the vaccine's developer.

Effect of Placebo Injections

Any consideration of the Salk vaccine is not complete unless consideration is given to one additional fact which has been overlooked in much of the discussion precipitated by the release of the Francis report. The effectiveness of the vaccine was judged by comparing the amount of poliomyelitis observed in a group of 200,745 children who received Salk vaccine with that of a group of 201,229 who received a placebo, or a series of three injections which did not contain actual vaccine. The Francis report cites an attack rate of 41 reported cases of poliomyelitis per 100,000 children in the group receiving Salk vaccine, and a rate of 81 per 100,000 in the group who received control injections. The decision to launch mass inoculation programs this year was based largely on this observation.

The observed rate of 81 per 100,000 in the control group is an unusually high rate of poliomyelitis for any group. Proof of this fact is found in the University of Michigan report itself, which shows that a third group of 338,778 children* who received neither a complete series of Salk vaccine or placebo injections experienced an attack rate of 54

reported poliomyelitis cases per 100,000. If one compares the experience of the Salk vaccine inoculated group (case rate of 41 per 100,000) with the rate among this large group who received no injections (rate of 54 per 100,000), the difference is small and apparent protection afforded by the Salk vaccine is considerably less significant.

This finding must raise a serious question as to the possibility that placebo injections in the field trials precipitated paralytic poliomyelitis, as has been established in studies dealing with certain other inoculations⁽³⁾. It is difficult to resolve this question from the published data in the Francis report. The week of onset of illness among the children receiving the placebo injections is given only in graphic form. The site of paralysis and the arm of placebo inoculation should be investigated beyond the four-week period already studied in the Francis report to rule out this possibility. If there is no evidence that the placebo inoculations provoked poliomyelitis, one may then question whether the control group who received inert inoculations could have been atypically distributed in such manner as to have served as a poor group upon which to judge the true effectiveness of Dr. Salk's vaccine.

Conclusion

On the basis of the further study of the Francis report and on what may be expected in terms of reported poliomyelitis in North Carolina, there is every reason to believe that the use of Salk vaccine among some first and second grade school children will have little influence on the poliomyelitis rates recorded in this state in 1955. It may be suggested that even widespread inoculations among hundreds of thousands of residents of North Carolina may have no statistical impact on the disease for several years to come.

Physicians and public health workers throughout the state have a moral obligation to warn parents not to be misled by a false sense of security should their children receive the vaccine this year or next. Professional health workers must take the initiative in voicing no great surprise if reported cases of poliomyelitis in 1955 and 1956 fail to show any decline over previous years in the state.

The necessity for the warning to parents is based on the continuing need for close observation of children during the season

*See above for discussion of age differences.

from July through September, when poliomyelitis is expected to be most prevalent. The danger of a child's developing poliomyelitis after receiving the Salk vaccine has been indicated in newspaper and magazine articles. It is hoped that reinforced safety precaution in manufacture may obviate this danger. A larger margin of safety in manufacture, however, may lower the margin of effectiveness as a poliomyelitis preventive. Continued close observation of all inoculated children is imperative, since the first warning that defective vaccine has reached the market may come when injected children contract the disease.

Of still greater importance is the recognition by all authorities that the vaccine is completely ineffective against nonparalytic poliomyelitis. Nonparalytic infections with neglect can progress to the more serious types of the disease. Recreation should be supervised and close attention given to habits of personal hygiene during the remainder of the year. The widely proclaimed common-sense precautions against poliomyelitis must not be overlooked while medical researchers continue their quest for an effective control method for this disease.

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Medical Education: Properly presented, the disciplines or medicine should bridge the gap between the humanities and science. That has been so in the past, and today it can be illustrated in the personalities and achievements of scores of medical men. And medical idealism is a counterbalance against materialism and the pragmatic philosophy of our time—two evils loudly bewailed by educators in all fields. This is why it is so necessary that medical education should bring to every student the essential transcendental nature of our profession from which much of the traditional wisdom and integrity of medical practice has been drawn and which has been nurtured and found its sanctuary within the humane traditions of the university.—Scarlett, E. P.: Tangibles and Intangibles in Medical Education, *Canad. M.A.J.* 73: 87 (July 15) 1955.

PULMONARY EMBOLISM

SAMUEL L. ELMON, M.D.

FAYETTEVILLE

Pulmonary embolism refers to the lodging of an embolus in the pulmonary arterial tree. This supposedly typical syndrome is quite often atypical and may occur without clinical recognition. The incidental post-mortem finding of organized emboli involving scattered pulmonary arteries is not uncommon⁽¹⁾. Clinicians and pathologists agree that pulmonary emboli, with or without infarction, often resolve without serious consequences, but unless the initial episodes are recognized and the source eradicated, further emboli and death may follow.

History

Homan⁽²⁾, in 1934, was among the first to emphasize that all pulmonary emboli are not fatal and unavoidable accidents. He stressed the importance of the deep veins of the legs as the site of origin of fatal and non-fatal emboli and described a means of preventing and treating this phenomenon. Only during the past 15 years has pulmonary embolism been well recognized clinically. Although much has been written about it during the last decade, it apparently continues to increase annually. This apparent increase is attributed to the following factors^(1a,3): (1) the advancing mean age of the population; (2) the use of more extensive surgical procedures on the aged; (3) the increasing incidence of trauma to bones and deep structures resulting from accidents; (4) the increasing awareness of the process, improved diagnostic methods, and more careful postmortem examinations.

Incidence

The high morbidity and mortality of pulmonary embolism⁽⁴⁾ emphasize its great importance. This complication, fatal and non-fatal, is reported to occur in nearly 1 per cent of all admissions to a general hospital⁽³⁾; in 1.2 per cent of all postpartum patients⁽⁵⁾; in 0.5 to 1.6 per cent of all postoperative patients⁽⁶⁾; and in 10 per cent of all cardiac patients⁽⁷⁾. It is almost three times more frequent among medical surgical admissions^(7,8). Pulmonary emboli are responsible for 50 per cent of all postoperative complications, and occur most frequently before the sixteenth and rarely after the thirty-third postoperative day⁽⁶⁾.

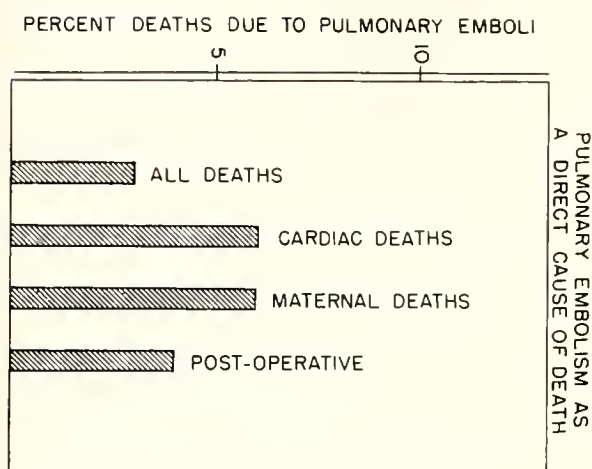


Fig. 1. Percentage of deaths due to pulmonary emboli.

Pulmonary embolism is reported to be the direct cause of death (fig. 1) in about 3 per cent of all autopsies⁽³⁾; in 3-5 per cent of all postoperative deaths^(3,9); in 5-7 per cent of all deaths in patients with coronary thrombosis and possibly rheumatic fever⁽³⁾; and in 5-7 per cent of all maternal deaths. Following pelvic surgery, 50 per cent of all deaths are attributed to pulmonary complications, pulmonary emboli being the most frequent etiologic factor⁽³⁾.

The incidence varies according to age, sex, and predisposing illness. In general, it is agreed that pulmonary embolism is a condition of later life, with a vast majority of the cases occurring in patients over 40 years of age^(3,8a). The highest incidence occurs between the ages of 40 and 60, but the highest mortality between 60 and 80^(8b). Before the third decade pulmonary embolism is rare in obstetric, cardiac and postoperative patients. In the hemiplegic it is extremely rare before the fourth decade. It is found with almost equal frequency in the two sexes or with a slightly higher incidence in the male. The complication is three times more common in obese than in slender patients⁽¹⁰⁾.

Contrary to previous concepts, recent reports^(7,8) show that pulmonary emboli, fatal and non-fatal, are more frequent in medical than in surgical patients. Reports vary as to the source of emboli in medical and surgical patients. This variation labels the predisposing illness as medical in nearly 75 per cent of the cases and as surgical in 25 per cent^(7,7,8b). The predisposing medical illnesses in their order of frequency are: car-

diac disease, hemiplegia, neoplasms, varices, pregnancy, ambulatory phlebitis, and others. In general, the complication is most frequent in elderly, bedridden patients, whose inactivity favors thromboses. In a group of such patients (comprising surgical and medical cases in equal numbers) who came to autopsy, 50 per cent⁽¹¹⁾ showed venous thromboses in the deep leg veins. Usually the postoperative pulmonary emboli are more serious, more dramatic, and more easily recognized than those in medical patients.

Etiology and Source

The primary cause of pulmonary embolism is the loose, free floating blood clot carried by the venous system and the right side of the heart into the pulmonary arterial tree. This clot is usually bland, but on rare occasions may be septic. The bland clots may originate in the right side of the heart or any portion of the extensive venous system draining into it. Actually, according to many reports^(3,5,6,8b,11), 85 to 98 per cent of all pulmonary emboli, fatal and nonfatal, originate in the deep veins of the calf muscles, 5 to 10 per cent in the veins of the pelvic plexus, 1.7 to 10 per cent in the veins of the upper extremities, and nearly 10 per cent in the mural thrombi in the right side of the heart (table 1). Even though the

Table 1

Sources of Pulmonary Emboli As Reported in the Literature

	Per Cent
Deep calf veins	85-98
Pelvic plexus	5-10
Upper extremities	1.7-10
Right side of the heart	10

heart, when infarcted, is not an infrequent focus of pulmonary emboli, these cases are rarely fatal. Bean⁽¹²⁾, in his studies of myocardial infarction, reported that all massive emboli that occlude the pulmonary artery under these circumstances are derived from the systemic veins. We may conclude that the valves and chambers of the right side of the heart are infrequently incriminated in fatal pulmonary embolism.

Pathogenesis of Venous Thrombosis

The mechanism responsible for intravascular clot formation is poorly understood. The following predisposing⁽¹³⁾ factors are recognized and generally accepted: (1) in-

jury to the endothelium of the vein causing adherence of platelets and initiation of the clotting process; (2) retardation of venous flow with relative stasis of blood in the veins; (3) changes in blood composition.

Injury and inflammation

The endothelium may be injured by trauma and perivenous inflammation. Focal areas of endothelial destruction and thrombus formation are generally believed to follow closely after trauma. Consequently, it is reasonable to begin measures against thrombophlebitis immediately after surgery, trauma, or confinement to bed for any reason⁽¹³⁾.

Delayed venous flow

Retardation of venous flow with relative stasis of venous blood is another factor in the formation of thrombi. Rapid blood flow is not suitable for the formation of a thrombus, possibly because (1) the force of the current pushes the first platelet deposits away from the vessel wall⁽¹⁴⁾, and (2) the thromboplastin formed at the site of the endothelial injury is rapidly diluted. The relative infrequency of arterial thrombosis supports this thesis.

The most favorable condition for thrombus formation, therefore, is slow venous return. The difficulty of forwarding blood from the legs is increased by the following factors: (1) prolonged reclining or sitting, especially if the legs are flaccid; (2) increased abdominal distension caused by adiposity, tight abdominal dressings, or pelvic venous congestion during pregnancy; (3) anatomic features of the upper calf and groin, where several plexuses of veins and arteries come together and compress the veins, slow the venous flow, and thereby predispose to thrombosis at these points. Finally, a slow current favors the formation of a dangerous propagating clot, just as a brisk current discourages such a process.

Changes in blood composition

Changes in the blood composition may increase the tendency to venous thrombosis. This is demonstrated by the increased incidence of venous thrombosis in patients with polycythemia or marked dehydration.

Thrombosis in the veins is favored by the conditions outlined above. Platelets attach themselves to the intima of a small vein and excite coagulation by release of thromboplastin. Soon leukocytes and fibrin are en-

tangled, and a white thrombus is formed. Red cells are added, and become the chief component of the main propagating clot as it extends centrally.

Adherence to the vein wall may take place in only a few scattered spots. The propagating clot, soft and fragile, waving free in a large vein such as the femoral or external iliac, is the source of pulmonary embolism. For the embolus, once broken off, meets no obstacle from its point of attachment in its course through the great iliac vessels, the vena cava, and the right side of the heart, and on into the pulmonary artery.

From this concept of thrombotic vein disease we may define phlebothrombosis or venous thrombosis as intravascular clot formation without antecedent inflammation of the vein wall. This type of thrombus is loosely adherent, and more dangerous as a focus of detachable clots, and is more difficult to detect because of the absence of symptoms.

Thrombophlebitis

Thrombophlebitis refers to antecedent inflammation of the vein wall and lymphatics, and other perivenous tissues in conjunction with the intravascular clot. This type of thrombus is more adherent and less likely to give rise to detachable free floating clots. Owing to the inflammatory changes, it produces more symptoms and is more easily detected.

If thrombophlebitis is present and remains untreated in one extremity, phlebothrombosis occurs in the other extremity in 30 per cent of the cases, because of reflex spasm or other factors⁽⁶⁾.

Thus phlebothrombosis is difficult to recognize clinically because of its minimal local and constitutional signs. The first indication of its presence may be the occurrence of a pulmonary embolus. This type of bland thrombus may progress to thrombophlebitis, and it is emphasized that these two conditions cannot be diagnosed as different entities unless they are found at opposite ends of the scale.

Pathogenesis and Consequences of Pulmonary Embolism

The clinical manifestations of pulmonary embolism depend on (1) the nature, size and number of emboli reaching the lungs and the extent of their propagation; (2) the caliber of the artery occluded; (3) the pre-embolic

Table 2

Anatomic and Functional Manifestations Consequent to Pulmonary Embolism

Anatomic Lesion		Clinical Manifestations	Consequences
Small pulmonary embolus		Mild and transient	Unrecognized or merely suspected
Massive pulmonary embolism		Severe and transient	Recovery
Avascularity distal to pulmonary embolus		or Severe and sustained	Death (frequent)
Massive pulmonary infarction			
Atelectasis	} Pre-infarction	Moderate and transient	Complete restitution to normal
Edema			
Hemorrhage			
Inflammation			
Necrosis	} Infarction	Moderate and sustained Severe and sustained	Fibrosis and recovery Death (rarely)
Fibrosis			

state of the heart, lungs and blood vessels; and (4) the reaction of the heart and lungs to the sudden obstruction. Following sudden vascular obstruction, disturbances in the pulmonary circulation develop. The manifestations of cardiac strain due to the obstruction to the outflow from the right side of the heart may coincide with the lodgement of a massive embolus. The manifestations of pulmonary consolidation of the lung distal to the obstruction generally require from 12 to 72 hours to develop.

The physiologic manifestations of pulmonary emboli vary (table 2). When the embolus is small, the entire episode may be transient and go unrecognized, or at best only suspected.

If the embolus is massive and occludes a main branch of the pulmonary arterial tree, especially where preexisting cardiac damage exists, any of the following cardiovascular phenomena may immediately become obvious, singly or in combination: (1) a sharp rise in the right ventricular pressure; (2) sudden pulmonary hypertension; (3) acute cor pulmonale; (4) lowered left ventricular pressure; (5) failure of the right side of the heart; (6) coronary failure; (7) peripheral vascular collapse. Death may follow in a matter of minutes. Other than a little edema, signs of pulmonary consolidation (infarction) are absent at autopsy.

Pulmonary consolidation will occur and manifestations of infarction will become obvious 12 to 72 hours after a massive or smaller embolus is lodged, providing the patient survives the immediate effect. Frequently these manifestations of infarction present the first indication of an embolism; this is

particularly true if the lodgement of the embolus was not recognized.

When atelectasis, edema, hemorrhage and inflammation are followed by complete resolution and restitution to normal, the condition is known as pre-infarction. Infarction is the end result when the above process is followed, not by resolution, but by necrosis of the pulmonary parenchyma and fibrosis. Unless the infarction is extensive, the clinical manifestations are moderate and complete recovery ensues owing to the dual blood supply to the lungs, which under stress undergoes rapid anastomosis. It is difficult to produce infarction unless an impediment in the pulmonary circulation is already present. If the cardiopulmonary damage is very extensive, an extensive infarction may precipitate death.

In spite of this generally accepted concept, pre-infarction may be associated with a transient infarct-like area of consolidation in the lung. The symptoms usually last from one to two days, and the roentgen shadow completely disappears in two to four days. If this lesion were a true infarct with destruction of the alveolar wall, it could not disappear in three to four days. This phenomena is attributed to incomplete infarction which heals by resolution instead of organization and fibrosis. Clinically, a transient shadow in the lung may well be a small infarct and not an infectious process such as pneumonia. This differentiation is important in the prevention of recurrent emboli and possible death.

Much remains to be learned about the pathogenesis of pulmonary embolism, with or without infarction. A simple mechanical obstruction of the pulmonary circulation

does not satisfactorily explain all of the manifestations of the condition. For this reason, the existence of secondary reflexes in the cardiopulmonary system has been postulated⁽¹⁵⁾. These reflexes may involve the pulmonary vasculature, bronchi, diaphragm, coronary arteries, neurogenic mechanism of the heart, and the peripheral vascular system. It is suggested that some of the clinical manifestations are consequent to abnormal reflexes originating in the inflamed veins or in the arteries lodging the emboli. For example, anoxia, which is frequently a striking feature of pulmonary embolism, cannot be explained by the local mechanical obstructive phenomena alone. It can be explained on the basis of some of these reflexes, as well as on such pulmonary abnormalities as atelectasis, infarction, and congestion.

Such reflexes have been invoked to explain the cause of death in persons who present the clinical picture of acute cor pulmonale, but prove at autopsy to have a relatively small pulmonary embolus. Contrariwise, one may postulate that in the absence of these reflexes, small pulmonary emboli may repeatedly go unrecognized and lead to chronic cor pulmonale.

Pulmonary embolism, therefore, may or may not be followed by pulmonary infarction, pre-infarction, acute cor pulmonale, peripheral vascular collapse, right heart failure, or coronary insufficiency. Thus these phenomena are not pathognomonic of pulmonary embolism. The diagnosis of pulmonary embolism, however, is based largely on symptoms, signs, and laboratory findings associated with pulmonary infarction and acute cor pulmonale.

The Clinical Picture

Small embolism

The clinical picture of pulmonary embolism is variable and depends on the factors outlined under pathogenesis. It is generally agreed that the condition may occur with or without infarction, and the two syndromes are not synonymous.

A small pulmonary embolism (table 2) will be overlooked unless a mild transient episode of syncope, breathlessness, a short paroxysm of rapid heart action, or an episode suggesting anginoid pain with a fall in blood pressure is suspected and correctly interpreted. X-ray examination is of little

value. Avascularity distal to the embolus may be recognized, but a dark shadow typical of pulmonary infarction is rarely seen and, if present, will disappear completely in two to four days. The prompt clinical recognition and proper interpretation of such episodes are important, since early diagnosis is imperative for the institution of therapeutic measures to prevent repeated episodes and fatalities.

Massive embolism without infarction

A severe and sustained episode due to a large massive pulmonary embolus without infarction may cause sudden death, particularly where previous cardiac disease exists. An elderly bedridden patient may suddenly begin to have severe dyspnea with violent exertion of the accessory muscles of respiration. Agonizing, oppressive, severe chest pain, usually substernal, is generally present, but may occasionally be entirely absent. Pallor, sweating, cyanosis, nausea, abdominal pain, and a desire to defecate manifests the progression of vascular collapse. Death may follow in a matter of minutes.

The physical signs are limited to the cardiovascular system and are compatible with those in acute cor pulmonale. They are best demonstrated in the pulmonic area. In the second and third interspace to the left of the sternum, prominent pulsation may be seen, shock corresponding to the closure of the pulmonic valve is evidenced, and overactivity of the pulmonary artery may be noted by palpation; accentuation of the second pulmonic sound, loud systolic murmur, and gallup rhythm are heard. When the right ventricle fails, the jugular veins are dilated and the pulsations are marked; the liver may be enlarged and tender.

Fluoroscopy will confirm the overactivity and dilatation of the pulmonary artery and conus, but will not show the dark shadow of pulmonary infarction except rarely, and then only during the first three to four days. Occasionally, distal to the obstructed artery one may see an avascular pulmonary shadow representing the bloodless lung it once irrigated, giving this portion of the lung an appearance of localized translucency compatible with emphysema (fig. 2).

The electrocardiographic changes in severe pulmonary embolism are typical of acute cor pulmonale and show a pattern compatible with right ventricular strain



Fig. 2. Chest roentgenogram of pulmonary embolism with avascularity of lung tissue distal to pulmonary embolism.

(fig. 3): Large S deflection in lead I, prominent Q and inverted T waves in lead III; and inverted T waves in the precordial leads over the right side of the heart. In many instances the only abnormality noted may be transient inversion of the T waves on the right side of the heart or incomplete transient right bundle branch block.

The electrocardiographic pattern of acute cor pulmonale was reported as present in only 20 per cent of 273 cases reported by White^(8a). The electrocardiographic changes in pulmonary embolism, if present, will most likely be found within a few hours after the embolus has been lodged and acute dilatation and strain in the right side of the heart remain. Since these changes are transient, they will be missed unless the electrocardiogram is taken at an opportune time. The usefulness of the electrocardiogram, therefore, is limited, since the changes do not always occur; and if myocardial anoxia is also present, the tracing will have the pattern of myocardial infarction and not pulmonary embolism with or without infarction.

Extensive pulmonary infarcts occurring in patients with abnormal hearts may precipitate intractable cardiac failure, shock and fever; and unless pulmonary thrombo-

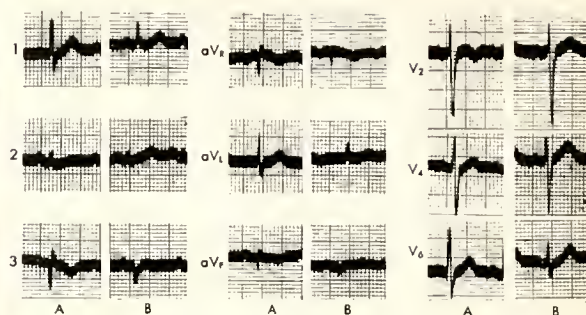


Fig. 3. The electrocardiographic changes in severe pulmonary embolism are typical of acute cor pulmonale and show a pattern compatible with right ventricular strain. (From Graybill, A., and White, E. P.: *Electrocardiography in Practice*, Philadelphia and London, W. B. Saunders Co., 1916.

embolic accidents recognized, the diagnosis will be missed.

Pulmonary infarction

More easily diagnostic is the clinical picture of extensive pulmonary infarction. The patient usually becomes suddenly ill and shows signs and symptoms of pulmonary consolidation, hemorrhage, atelectasis, edema, and inflammation. Chest pain, dyspnea, and cough are usually the first symptoms; hemoptysis, jaundice, cyanosis, and vascular collapse are frequently present at the onset, if cardiac impairment preceded the infarction. A simultaneous rise in temperature, pulse, and respiration is very frequent. The sedimentation rate and leukocyte count are elevated with the first clinical manifestations. Upon physical examination, pulmonary signs are recognizable in only 50 per cent of the patients. These signs may be found anywhere, but since the lower lobes are most commonly affected, the signs are most frequently found at the bases posteriorly and laterally, and most often in the base of the right lung.

Pneumonia is often diagnosed in the presence of cough, dyspnea, cyanosis, fever, chest pain, friction rub, and a shadow in the lung, especially in the absence of hemoptysis. If the course of the pneumonia is marked by a transient fall in blood pressure with recovery in a few hours, the clotted sputum of pulmonary infarction, or the signs and symptoms of thrombotic vein disease, then the working diagnosis of pneumonia is invalidated and pulmonary infarction is recognized as the true diagnosis.

X-ray and fluoroscopy are inconclusive in diagnosing pulmonary embolism with infarc-

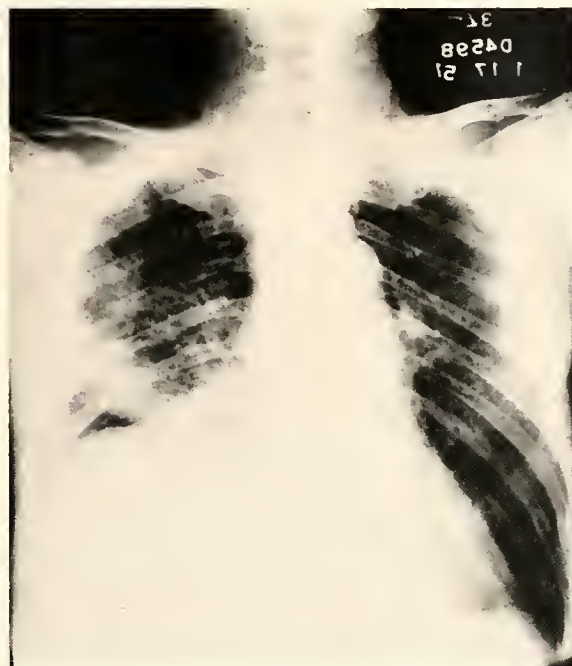


Fig. 4. Chest roentgenogram of pulmonary embolism with a wedge shaped pulmonary infarct radiating peripherally with elevation of the diaphragm in the involved right side.

tion; however, the findings are frequently suggestive and help to arouse or confirm a clinical impression. Small plate-like areas of atelectasis at the bases are the most common x-ray finding. A wedge-shaped infarction may occasionally be seen radiating peripherally, with elevation of the diaphragm on the involved side (fig. 4). Healing or healed infarcts may cause transverse linear densities which may be confused with interlobar pleurisy. Pleural fluid secondary to pulmonary infarction is rare in the absence of congestive failure. Even massive infarction alone may only show minimal pleural fluid. The excellent work of Hampton and Castleman^(1a), in which chest findings were correlated with immediate postmortem chest roentgenograms and autopsy findings, established the lack of roentgen ray findings typical of pulmonary embolism and infarction.

The electrocardiographic changes are the same as those associated with pulmonary embolism without infarction. If the findings are compatible with infarction, they confirm the clinical impression; but if not consistent, they do not rule out the presence of a pulmonary infarct.

Table 3

Frequency of Clinical Manifestations in Extensive Pulmonary Infarction	
Symptoms and Signs	Frequency Per Cent
Chest pain	75-90
Dyspnea and cough	50
Hemoptysis	25
Jaundice—cyanosis	
Vascular collapse (seen more often with cardiac disease)	
Pleural effusion	
Pleural friction rub	25
Consolidation, atelectasis	
Elevated diaphragm	
Immediate elevation of temperature, pulse, respiration, sedimentation rate and white blood cell count	
Roentgen and electrocardiographic findings	

Frequency of signs and symptoms

Short⁽⁷⁾ summarized the frequency of the symptoms and signs due to pulmonary thromboembolic accident (table 3). According to his series, which compares favorably with other reports, the following average frequency may be anticipated.

Chest pain, often intensified by respiration, is the most frequent single symptom and was found in 75 to 90 per cent of the cases; pleuritic pain was the etiologic factor in 50 and anginal pain in 25 per cent; pleural friction rub was heard in 10 to 25 per cent. Pleural effusion is usually hemorrhagic and unilateral, and is most frequently found with heart disease. If the effusion persists in spite of the use of digitalis and diuretics, it is most likely due to infarction. Dyspnea, mild or severe, is noted in about 50 per cent of the cases, and wheezing and pulmonary edema may occur—the latter is not uncommon. Cough is almost as common as dyspnea, being present in about 50 per cent of the cases. Hemoptysis was seen in 40 per cent of the cases of pulmonary embolism accompanying heart disease, but in only 17 per cent of those without heart disease. It is generally seen in 25 per cent of all cases of clinically recognized pulmonary embolism. Therefore, if pulmonary embolism is not diagnosed in the absence of hemoptysis, 75 per cent of the cases will be missed.

Jaundice frequently follows pulmonary embolism and infarction in persons with congestive heart failure, but otherwise is rare. Jaundice is thought to result from in-

ability of the congested and anoxic liver to excrete with normal rapidity the large amount of bilirubin formed by destruction of red cells in the infarct.

Fever occurs in two thirds of the cases of pulmonary embolism and is primarily due to infarction. It may follow embolization almost immediately and be its only manifestation. There is no characteristic febrile curve except that sharp spikes in temperature commonly coincide with the onset of other clinical manifestations. Fever as high as 103 or 104 F. may be sustained for a week and gradually drop to normal without the occurrence of chills.

Tachycardia is the rule in one half of the patients with pulmonary embolism, and rates as high as 140 per minute are not uncommon. Paroxysmal auricular fibrillation, and less often paroxysmal auricular tachycardia and paroxysmal auricular flutter, may complicate pulmonary embolism. Arrhythmia and a fall in blood pressure may occur early with this complication.

Diagnosis

A high index of suspicion is of primary importance in establishing a correct diagnosis. A massive pulmonary embolus, with or without extensive infarction, can be recognized quite readily and confirmed by the clinical picture, if thrombotic vein disease is recognized. The accessory clinical findings, including roentgen studies and electrocardiography, are confirmatory if positive findings can be demonstrated. The elevated sedimentation rate, leukocyte count, and hyperbilirubinemia are evidence of pulmonary infarction, but may represent a reaction to phlebitis or other infection (table 4).

A smaller embolus, with or without infarction, may present remarkably little to suggest the diagnosis. The most common immediate cause of pulmonary embolus is thrombotic vein disease of the lower extremities. Involvement of the veins can be the most useful confirmatory sign of atypical pulmonary embolism.

Suspicion should be aroused if an elderly bedridden patient suddenly becomes worse and rapidly develops any of the following phenomena: pleuritic pain, hemoptysis transient and recurrent, dyspnea, syncope, vascular collapse, paroxysmal auricular tachycardia, substernal distress, cyanosis, jaundice, elevation in temperature, pulse and respiration, pulmonary edema, persis-

Table 4
Diagnosis

	Massive Pulmonary Embolism	Extensive Pulmonary Infarction	Small Pulmonary Embolus
Clinical picture	+++	+++	+
Electrocardiogram	++	±	0
Fluoroscopy and roentgenography	±	++	0
Blood studies			
Elevated sedimen- tation rate	0 (or)	+	0
White cell count	++		0
Thrombotic vein disease	++	++	++

tent unilateral effusion despite satisfactory general response to therapy, elevated leukocyte count and sedimentation rate.

In patients who do not have pulmonary embolism but for obvious reasons are considered likely candidates for it, this complication can be prevented by early recognition of the etiologic factors. Thrombotic vein disease accounts for nearly all the fatal thromboembolic accidents. Because of the nature of the pathogenesis of phlebothrombosis, signs and symptoms are few and often exist unrecognized. Thrombophlebitis, which is a less frequent cause of pulmonary emboli, can be recognized if the following signs and symptoms are correctly interpreted: aching in the calf or thigh with edema and cyanosis, becoming more obvious when the patient stands and diminishing when he is recumbent; pain in the calf of the involved leg, made worse by forcible dorsiflexion (Homans' sign); and possible elevation of the pulse and temperature to a widely variable degree. If this stage in the pathogenesis is overlooked, pulmonary embolism is regarded as unexpected. The more severe is the involvement, the more strongly positive are the signs and symptoms. They should be investigated, even after an episode of pulmonary embolism, in order to avoid repeated and often fatal episodes.

A laboratory test to indicate the possibility of thrombosis is needed. Although several procedures have been suggested⁽¹⁶⁾, none of these is of practical value. Early diagnosis still depends on the clinician's diagnostic ability.

Differential Diagnosis

The clinical course of pulmonary embolism is variable and therefore simulates other disorders. The more common of these are angina pectoris, acute myocardial infarction, pleurisy with or without effusion, pneumonia, tuberculosis, acute heart failure,

Table 5
Differential Diagnosis

	Pulmonary Infarction	Myocardial Infarction
Pain	Usually pleuritic; may follow pulmonary embolism by 24 hours	Anginoid; immediate
Temperature, pulse, respiration; white cell count, sedimentation rate	Elevation on onset of symptoms	Elevation 24 hours after onset of symptoms
Roentgenography and fluoroscopy	Pleurisy with or without effusion; consolidation; elevated diaphragm	Negative or indicative of passive congestion
Electrocardiography	Characteristic findings in absence of heart damage	Characteristic of myocardial damage

asthma, tumor, and pulmonary collapse.

Pulmonary infarction in a patient with passive congestion is difficult to recognize until the congestion in the pulmonary vascular tree is cleared. If infarction is present, unilateral effusion or consolidation will remain despite satisfactory general response directed to the cardiac failure. The appearance of hemoptysis and elevation of the temperature, sedimentation rate, and leukocyte count will often further confirm the existence of an infarct.

Coronary failure or acute myocardial infarction presents a challenging problem in the differential diagnosis (table 5). The electrocardiogram in myocardial infarction is quite different from that of pulmonary infarction and can be differentiated with the 12 lead electrocardiogram. If both conditions occur, however, the electrocardiogram will show the pattern of the myocardial damage. In pulmonary embolism syncope, paroxysmal auricular fibrillation, tachycardia, fall in blood pressure are seen early and precede pain. Fever, leukocytosis, and an elevated sedimentation rate almost immediately follow the occurrence of pulmonary infarction, but usually occur after 24 hours in myocardial infarction. Pleuritic pain, intensified by respiration, is rather common in the former, but rare in the latter.

Deep cyanosis, acute dyspnea, and pulmonary edema in a patient without obvious heart or pulmonary disease most likely results from an embolus in the pulmonary arterial tree.

Despite the many warnings which have been given during the past 15 years, there are repeated reports on the frequency with which this condition is not correctly diagnosed. Roe and Goldthwait⁽¹⁷⁾ report that 53 per cent of 92 deaths from pulmonary emboli were without clinical warning. Kirby

and Fitts⁽¹⁸⁾, in discussing two large series, report that there was no warning of fatal embolism in 71 per cent of the patients in one series and 82 per cent of the other. It is concluded, therefore, that a mistaken diagnosis, ignoring the warning of pulmonary embolism, may be followed by a more massive embolus and sudden death.

Treatment

Early diagnosis and prompt treatment are of primary importance in reducing the morbidity and mortality due to pulmonary embolism. The objectives of treatment are: (1) to administer life-saving measures promptly, when the severity of the case demands it; (2) to prevent subsequent pulmonary emboli.

Emergency measures

Emergency treatment should be initiated immediately and continued throughout the critical period. The following life-saving measures are designed to relieve cyanosis, dyspnea, pain, apprehension, and cardiovascular collapse⁽¹⁹⁾:

1. Oxygen administered by mask, if available, to relieve the dyspnea, cyanosis and vascular collapse.

2. Papavarine 0.12 Gm. (2 grains) given every two to four hours intravenously or intramuscularly depending on the gravity of the condition until the manifestations of spasm are relieved.

3. Morphine, to relieve pain and apprehension (The recommended procedure is 8 mg. ($\frac{1}{8}$ grain) given every 10 minutes intravenously until relief is obtained⁽²⁰⁾. If signs of respiratory depression appear, this therapy must be discontinued immediately, even if the relief is incomplete.)

4. Plasma and blood, if vascular collapse occurs.

5. Digitalis, only if paroxysmal auricular

tachycardia or auricular fibrillation is present.

6. Antibiotics for the prevention of infection. (Their value is dubious unless infection is definitely present.)

Such measures promote the comfort of the patient and support the circulation, and, if urgent, take precedence over other therapy.

Embolectomy, first described by Trendelenberg, is the actual surgical removal of a pulmonary embolus. This is possible if a well trained team is available and can perform the embolectomy as soon as death appears imminent. As such signs develop and consciousness is lost, the pulmonary artery may be exposed and the clot removed. Today the chances of survival are better than ever before, if the surgical team is well-qualified.

Prophylaxis

A program of prevention is essential to reduce the incidence of pulmonary emboli. This program includes the following procedures: (1) general measures designed to prevent thrombotic vein disease; (2) anticoagulant therapy to prevent the further growth and embolization of thrombi; (3) vein ligation to block the embolization from the lower extremities to the pulmonary arteries.

General measures

General measures designed to prevent thrombotic vein disease are numerous and emphasize the difficulty of preventing venous thrombosis and the importance attributed to this factor in the etiology of pulmonary embolism. Slowing of the blood flow in the lower extremities and injury to the venous endothelium^(20,21) are two important contributing factors in the poorly understood etiology of venous thrombosis. Procedures to prevent retardation of venous return include: (1) continuous ambulation, preoperative as well as postoperative, of people who are most likely to develop phlebitis⁽²²⁾; (2) exercise for the bedridden, including elevation of the feet, pressing the feet against a footboard, wiggling the toes (to exercise calf muscles), and deep breathing⁽²⁾; avoidance of pressure from pillows in the popliteal space; (3) the use of elastic stockings^(19,23) to reduce the caliber of the veins and thereby increase the rate of venous blood flow; (4) prompt intubation

of distended intestines, avoidance of abdominal binders, and weight reduction in obesity; (5) avoidance of simple standing and especially sitting with the attendant risk of vascular stasis; (6) avoidance of smoking or sudden chilling with the risk of vasoconstriction. Procedures to prevent injury to the vascular endothelium include atraumatic surgery, avoidance of injury, and prompt treatment of inflammation and contusion.

Anticoagulants and venous ligation

Anticoagulants⁽²⁴⁾ and vein ligation⁽²⁵⁾, either singly or in combination, are used to treat existing embolism and prevent further thromboembolic accidents. Prophylactic vein ligation prior to surgery in elderly patients has not appreciably reduced the incidence of pulmonary embolism; but some observers still believe it is a worthwhile precaution⁽⁷⁾. More recently anticoagulants have been administered prophylactically with impressive results, chiefly to patients with acute myocardial infarction and congestive heart failure.

Studies of large numbers of patients indicate that both of these methods have been remarkably successful in reducing the incidence of pulmonary embolism. Neither method has proved to be routinely more successful than the other. In general, it is agreed that as soon as the diagnosis of pulmonary embolism or venous thrombosis is made, anticoagulant therapy should be employed immediately, unless contraindicated. That this method is nonsurgical is of some advantage; however, the complications and dangers are equal to those of vein interruption, especially if the vein ligation can be done in the extremity.

Anticoagulants, if properly administered, have the following advantages:⁽¹⁵⁾ (1) the thrombosis can be controlled regardless of its location; (2) propagation of clots in thrombosed veins or in a pulmonary artery lodging an embolus can be inhibited; (3) a surgical procedure is avoided, especially in poor risk surgical patients; (4) later effects of vein ligation are eliminated.

Heparin and Dicumarol are the anticoagulant drugs of choice. A number of other drugs are being tested, but none has been proved superior. The advantages of heparin over Dicumarol are that it affords immediate protection, the therapeutic dose is controlled by the coagulation time (and this procedure is easier than the prothrombin

time), and its shorter duration lessens the danger of hemorrhage. Disadvantages are its higher cost and the lack of an oral preparation.

Heparin reacts with prothrombin to prevent thrombin formation, inactivates existing thrombin, and reduce platelet adhesiveness. The drug may be given by any parenteral route. Intermittent intravenous injections are satisfactory. The desired effect of heparin is prolongation of the clotting time from a normal of 5 to 12 minutes (Lee-White method) to a therapeutic range of 20 to 30 minutes. The initial dose may be 75 to 100 mg., and determinations of the clotting time should be repeated every four to six hours. Within one hour after administration, 80 per cent of the inactivated heparin is excreted by the kidneys and the clotting time returns to normal in two to six hours; therefore this dose must be repeated every four to six hours.

Other modes of administration are by the intravenous and subcutaneous routes, in which 100 to 200 mg. of heparin, in 1000 cc. of glucose or saline is slowly administered at the rate of 20 to 25 drops per minute. Heparin/Pitkin* and Depo/Heparin** are given by subcutaneous injection. An average dose of 300 mg. per day is required to sustain reduced coagulability of the blood.

Bleeding due to excessive administration of heparin will usually stop in a few hours as the effects of the drug wear off. If it continues, 20 mg. of protamine sulfate can be given intravenously for every gram of heparin to be neutralized. Usually 50 mg. is required to stop the bleeding quickly. The need for protamine is very rare.

Dicumarol has the advantages of being less expensive and of being effective when given by mouth. The site of action is the liver, where it prohibits the secretion of prothrombin. After ingestion, Dicumarol is absorbed from the intestine and carried to the liver, where it remains indefinitely, and is excreted via the bile into the intestines. The drug is given orally and usually takes from two to four days to become effective. The dose is controlled by a daily prothrombin determination on the basis of the Quick test. The optimum therapeutic range of prothrombin activity is between 10 and 30 per cent. Generally, 300 mg. is given the first

day, 200 mg. the second, and approximately 100 mg. thereafter, depending on the prothrombin time test. If the prothrombin activity is less than 20 per cent, the dose should be reduced; if less than 20 per cent, it should be omitted. If necessary, the activity of prothrombin can be increased by 500 mg. of vitamin K₁ oxide, given orally or intravenously, which will be effective in three to four hours. A unit of fresh blood plasma will increase the prothrombin activity quickly, but only temporarily.

As a rule, heparin and Dicumarol are started simultaneously. When the Dicumarol effect is obtained, the heparin is discontinued.

Thrombocytopenia, recent surgical wounds, and ulcers of the gastrointestinal and urinary track are contraindications to the use of heparin. Dicumarol is contraindicated by these conditions as well as by renal and hepatic insufficiency.

Venous ligation has the advantage of simple management and more effective control. In addition, it is useful when anticoagulants are contraindicated, in pregnancy, when anticoagulants affect fetal coagulation more than they do maternal coagulation, and in patients who have repeated infarcts despite anticoagulation therapy. Many authorities agree that ligation of the veins in the lower extremities should be bilateral, but need not be done except under the above circumstances. Ligation of the inferior vena cava should be a last resort procedure; however, when other measures have failed, it may be life-saving⁽²⁷⁾.

Summary

The pathogenesis of venous thrombosis and its etiologic importance in the production of pulmonary emboli have been discussed. The high morbidity and mortality secondary to pulmonary emboli has been emphasized. The clinical manifestations, accessory clinical findings, diagnosis, and treatment have been reviewed. Subclinical episodes of venous thrombosis, pulmonary emboli, pulmonary infarction go unrecognized because of the absence or improper interpretation of transient clinical manifestations.

Venous thrombosis and pulmonary emboli are difficult to prevent in spite of the employment of numerous prophylactic measures. Statistical proof of the effectiveness of treatment is difficult to obtain, but clinical

*Warner Hudnut-Chillecot

**Upjohn Co.

experience appears to indicate that the aforementioned procedures are worth while. It is evident that many important problems relative to thrombotic vein disease and pulmonary embolism remain unsolved.

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LEPTOSPIROSIS

Its Public Health Significance

WALTER C. HUMBERT, M.D., M.P.H.
GREENVILLE

Leptospirosis, or, as it has been commonly called, "spirochetal fever," is not primarily a disease of man. It is a disease of rodents, dogs, cattle and other domestic warm blooded animals, and is caused by the organism of the genus leptospira. It is manifested by acute, chronic, or latent infections. Man is infected by contact with infected animals or by means of food, water and soil that has been contaminated by infected animals. As yet, from one human being to another transmission has not been found to be an important factor.

Spirochetal fever (Weil's disease) was first described in 1886. The causative organism of this condition, which is characterized by fever associated with jaundice and involves both kidney and spleen, was finally isolated in 1915 by Inada and his associates⁽¹⁾, who at the same time also disclosed the role of rats as the natural vectors of the disease. Stimpson, however, in 1907, examined tissue sections of an icteric patient who had died in New Orleans, and described spirochetes as being found in kidney tissue⁽²⁾. Stimson felt that he had discovered the causative organism of yellow fever.

Since the early part of the century, Leptospiral infections have been the object of

much study, but only in the last few years have these conditions attracted the attention they deserve. A great stimulus to the study was given by the veterinary profession, whose members contributed most of the early literature on leptospirosis.

Incidence

The distribution of leptospirosis is widespread, since its hosts are found in nearly every inhabited area of the world, the arctic zones excepted. By 1937, cases in human beings had been reported from 46 countries⁽³⁾, and in the United States by 1950, from coast to coast. The bovine infection has now been reported in 40 of the 48 states⁽⁴⁾.

There is no definite seasonal prevalence for the disease in man. In the United States, however, most the cases reported have occurred during the period from February to September inclusive. *Leptospira* like moist conditions; and where the ground is dry, the organism does not long survive outside the host. It flourishes during the rainy spring months and in shady, moist areas such as marsh and woodlands. Streams and swimming pools are also favorite hideouts.

Transmission

The organism *leptospira* enters the human body through abrasions of the skin and mucous membranes. Because it requires alkalines for survival, the alkaline urine of animals is a fine natural medium. Where contaminated animal urine is deposited in moist cool areas, the organism will live for a considerable time outside the host body. Man usually becomes infected by indirect contact with urine-contaminated soil, water and food. Ingestion of the organism by man rarely results in infection, because of the acid contents of the human stomach. Since human urine is usually acid, transmission from man to man by this means is likewise improbable.

Because of man's close association with dogs, cattle, swine and rodents this report is primarily limited to the public health significance of leptospiral infection in these animals, and with the subsequent transmission to man. More specifically, the discussion will be limited to the infection resulting from *L. pomona* and *L. canicola*.

Bovine and Canine Leptospirosis

Cattle, being one of the most important factors in our economy, constitute one of the

biggest reservoirs of leptospiral infection. The isolation of the causative organism of bovine leptospirosis and its subsequent identification in 1947 by Baker and Little was an important step toward understanding the pathogenesis and epidemiology of the disease⁽⁵⁾. In cattle the manifestations of leptospiral infection vary from a severe fulminating course to one mild enough to be classed as subclinical. The symptoms and signs range from severe icterus with hemoglobinuria and prostration to such mild symptoms that the only noticeable finding could be expressed by the term "lazy cow." In many cows the only sign is repeated abortions. In this respect leptospirosis is very similar to brucellosis.

Transmission from herd to herd results from contact between individual cows, although contact with contaminated streams and pastures is also an important means of transmission. Herd transmission may be explosive or slow and constant, over an extended period. Cattle that have naturally recovered from the disease are probably immune for life⁽⁶⁾. Explosive outbreaks among cattle have occurred where animals have been kept in congested and unsanitary environments. A number of disastrous epizootics have occurred after herd assembly or introduction of new stock in sales channels. In spreading among cattle the disease follows virtually the same pattern as does brucellosis⁽⁷⁾.

The various types of *leptospira* usually show a predilection for certain species of animals. As a rule, one or two species of animals serve as a reservoir for a given species of *leptospira*, but crossinfection to other animals occurs more frequently than was first realized⁽⁸⁾. *L. canicola* does not limit itself to dogs, but has been found in other animals, particularly cattle and swine. Also, *L. pomona* has been found frequently in horses and swine. Because dogs have been accepted as the universal household pet, they furnish a good reservoir for the survival and dissemination of *L. canicola*. The significance of this relationship between man and dog was first recognized by Meyer and his associates, in California, in 1938⁽⁹⁾. They pointed out at that time that there was a definite occupational hazard to veterinarians and kennelmen who have contact with infected dogs.

Leptospirosis in North Carolina

The history of leptospirosis in North Carolina was brought to light originally by the famous epidemic at Fort Bragg which led Gochenour and his associates to coin the term "Fort Bragg Fever."⁽¹⁰⁾ They identified the etiologic agent as *L. autumnalis*, but were unable to locate its animal host. Since that time investigators in Japan have found *L. autumnalis* in rodents, cows, and dogs⁽¹¹⁾

Leptospirosis has been studied by the veterinary profession in North Carolina for the past decade. It was not until 1953, however, that it was made a reportable disease in the population of this state. It was classed under the clinical sign of jaundice, together with infectious and serum hepatitis. In 1953 one human case was reported; in 1954, 10 cases were reported, and so far in 1955, no cases have been reported.⁽¹²⁾ Both *L. pomona* and *L. canicola* have been identified. Of the 11 cases reported, 2 were fatal, one caused by *L. pomona* and the other by *L. canicola*.

Review of Cases

As health officer of Pitt County, I have investigated 11 suspected cases of leptospirosis since January 1, 1954. Virtually all occurred in the wet spring months of 1954, during a period of prevailing high water and flood conditions. Nine cases gave sufficient evidence to be reported to the State Board of Health as clinical cases of leptospirosis. The first case to be confirmed was fatal. The other patients made uneventful recoveries. All cases were in children, 2 Negro and 7 white—ranging between 7 and 16 years of age. The sex distribution was equal. All cases occurred in rural families, but not all had histories of contact with farm animals. Five cases were specific for *L. canicola*—2 for *L. pomona*, and 2 had mixed serologic findings with *L. canicola* giving the strongest reaction.

One of the cases is interesting from both an epidemiologic and clinical standpoint.

The patient was an 8 year old Negro boy, the son of a tenant farmer, who had been diagnosed by his physician (pediatrician) from clinical and laboratory findings as having leptospirosis. Serial blood serums showed rising titers to *L. pomona*, the highest titer being 1:2048. The patient was given antibiotic therapy, and made a speedy and uncomplicated recovery.

An epidemiologic investigation by the veterinarian of the North Carolina State Board of Health and I revealed that the child had had no known contact with farm animals which were suspected of having leptospirosis⁽¹³⁾. The boy had helped

his father dig drainage ditches and had worked in areas of field flood water. Rat signs were plentiful around the living premises. An ordinary billy-goat was a household pet and roamed the premises unmolested. Drinking water was obtained from an open, unprotected well which could easily have been contaminated with goat urine. The goat was suspected, bled and found to have a titer of 1:512 to both *L. pomona* and *L. canicola*. Observation of the goat disclosed no striking sign other than "listlessness." Three months later the goat was again bled and then had a reaction of 1:1280 for *L. pomona* and 1:320 for *L. canicola*. The goat was purchased from the farmer-owner and sent to the North Carolina Laboratory of Hygiene for study. At autopsy a specimen of sterile urine was positive for *L. pomona*. This organism was isolated and grown in pure culture. This is believed to be the first reported case of *L. pomona* in goats⁽¹⁴⁾.

Experience of the State Laboratory of Hygiene

In order to expedite laboratory reports, personnel of the North Carolina State Laboratory of Hygiene in 1954 adopted the agglutination technique, using killed antigen, for the diagnosis of leptospira. Since the laboratory started making its own examinations, and up to January 1, 1955, 168 human serologic specimens have been examined, with 42 positive results. Seventy-five cattle blood specimens have been tested, 53 being positive⁽¹⁵⁾. The first reported and confirmed outbreak of leptospirosis in swine in North Carolina was investigated early in 1955, and the infection was found to be caused by *L. pomona*⁽¹⁶⁾. The symptoms causing this investigation was the aborting of a registered gilt.

It is now apparent that leptospirosis in cows, swine, and dogs is probably widespread in North Carolina. There is no reason to doubt that any warm-blooded animal, either domestic or wild, is a susceptible host.

The close association between human beings and these animals is most significant. Leptospirosis infections in man must be considered in relation to other diseases which infect man through the agency of animal hosts, such as endemic typhus fever, tularmia, brucellosis, and the rickettsial diseases.

It is of public health interest that the incidence of infection among human beings appears to be the greatest in those having close contact with animals, such as farm workers, fishermen, barge workers, slaughter-house workers, gardeners, plumbers, and sewer workers. To these must be added veterinarians and kennel attendants, dairymen, and people employed on hog farms.

The boy and his dog must not be forgotten. Another group can be termed as the "water accident" group, because of their contact with water that has been contaminated by animal urine at bathing beaches and in streams.

The association of leptospirosis with infectious hepatitis and serum hepatitis through the common sign of jaundice should be indicative, and for this reason many cases of leptospirosis probably have been overlooked or wrongly diagnosed without laboratory confirmation.

Unlike infectious or serum hepatitis, leptospirosis in man can now be easily differentiated by a specific laboratory blood serum reaction. It seems logical, therefore, that an early differential diagnosis should be made in all cases of jaundice. The agglutination test for leptospirosis as performed in the North Carolina Laboratory of Hygiene appears to be specific. The tests do not show immediately in the early phases of acutely ill patients, but if the infection is leptospirosis there will be a steadily rising titer on serial blood serums. End titers may run very high; not infrequently one is found to be as high as 1:10,000. The common range of confirmed cases usually is in the 1:500 to 1:3000 bracket.

Summary and Conclusion

The knowledge obtained from the veterinary profession that leptospirosis in farm animals and domestic pets is widespread in North Carolina should stimulate the practicing physician and public health official to look with suspicion on any case of jaundice with a history of contact with farm animals. The acutely ill jaundiced patient residing in any but a strictly urban community should be suspected as a candidate for leptospiral infection. In urban communities, industrial workers such as slaughter-house men and plumbers with an illness characterized by jaundice should be given a differential study for leptospirosis. In one of the fatal cases in North Carolina, the attending pediatrician stated significantly that, in his belief, "many similar cases are not at the present time being recognized."⁽¹⁷⁾

The past 10 years have seen a remarkable change in the opinion of those familiar with the leptospiral infections. No longer are these infections to be considered of importance only in the livestock industry, but should now be looked upon as constituting

a potential major public health problem. The united efforts of the medical and veterinary professions, laboratory and public health workers, are needed in order to diagnose, control, and prevent the spread of leptospirosis.

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REPORT ON MEDICAL ASPECTS OF CIVIL DEFENSE BY THE IMPLEMENTATION COMMITTEE OF REGION THREE, FEDERAL CIVIL DEFENSE ADMINISTRATION

M. M. VAN SANDT, M.D.*

THOMASVILLE, GEORGIA

It is a privilege to address this annual session of the North Carolina Medical Society. It is noteworthy that your society recognizes the importance of civil defense and has included it on the agenda of your annual meeting. Civil defense is a timely subject and one that will overwhelm our health resources if they are ever needed as the result of an enemy attack.

When we review the Assumptions for 1955, as prepared by the Federal Civil Defense Administration and approved by the administration; when we acknowledge and recognize the implications of the recent press dispatches concerning fall-out from residual radiation; when we think of the

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*Regional Medical Officer, Federal Civil Defense Administration, Thomasville, Georgia.

implied reality of an enemy attack through the preparations of the FCDA and the administration for the Exercise Alert, to be held June 15-16, 1955, we can only admit to ourselves that we are living in an age of peril.

All of you as physicians, and those in the audience who represent the allied specialties which support the physician in his care of the sick and injured, recognize that our health services, in general, are even now overtaxed to provide adequate care for those seeking our services. Public health and sanitation functions which supplement medical care in all its facets must always be in our minds.

What are we preparing for? With the accepted fact that the Soviets can attack any target in the continental United States; that in case of such an attack there could be less than one to two hours, at the very most, of warning; that many of the attackers would get through our lines of defense; that their objective to destroy our production and the will of our citizens to resist will call for nuclear weapons the equivalent of thousands to millions of tons of TNT in an all-out attack on 70 Critical Target Areas which contain 3 per cent of our land area, 50 per cent of our population, 40 per cent of our existing hospital beds, and 50 per cent of our professional health personnel—what may we expect?

It is assumed that such an attack would leave 13,000,000 casualties. Eight million two hundred thousand of these would survive the first 24 hours and 5,000,000 would survive eventually. This assumption is based upon the effects of blast, heat, and initial radiation as applied to the Critical Target Area with little, if any, evacuation of their citizens. Now we must add the implications of the H-Bomb in fall-out and residual radiation. It is estimated that an area, roughly cigar-shaped, 40 miles wide and 220 miles long in the direction of the wind on the day of the explosion would be blanketed with injurious radiation producing from disabling to fatal results. In addition, water, sewage, food, milk, and other necessities would be destroyed, disrupted and contaminated; and, with the accumulation of waste and debris, our health environment would be untenable unless specific plans are developed, assignments of responsibility are

made, and "dry runs" or rehearsals are performed.

What must we do? Our answer is not the same as that of the Irish policeman who was up for his final examination, and was asked, "What is rabies, and what can you do about it?" After much thought, head scratching and deliberation, he replied, "Rabies is Jewish priests, and there ain't nothing you can do about them." There *is* something we can do about civil defense preparedness.

In order that we may be prepared, the following services must be provided:

1. *Casualty care.* This includes first aid, first aid stations, improvised hospitals, fixed hospitals, mutual aid and mobile support.

2. *Blood program.* It is estimated that the blood needs in the first 72 hours after an attack as earlier described would be equal to all the blood needs of our country for eight months in peace time. More about this subject later.

3. *Health protection.* This includes ABC warfare, maintenance of normal health environmental protection, and disease control methods.

4. *Sanitation* services involve protection against health hazards from spoilage or contamination of foods, water, milk, and so forth, and against disruption of or provision for sanitary disposal of wastes, or hazards from insects and rodents.

5. *Resources.* This service establishes units of resources, keeps perpetual inventory of resources, coordinates resources from other federal agencies, determines federal stockpile program, develops matching program under contributions.

We have now reviewed the problem, identified what we assume could be the result, and identified the fields in which we must provide professional, trained and untrained lay personnel. Now we can enter the subject of this presentation, "Report of the Implementation Committee for Region Three Health Services."

Organization and Objectives

This Committee is composed of the following members: the state health officers of our seven states, since these officers are directly responsible for civil defense health services by order of their respective state governors; one representative from each of the seven state medical, hospital, dental, and nursing associations; three from the staff of the Southeastern Area, American

National Red Cross; and three from the staff of Region Four, U. S. Public Health Service. In addition, the members of the Region Three Health Service Advisory Committee representing the American Veterinary Medicine Association, and a mortician represent these phases of our interest.

I believe that you would be interested in the origin of this Committee. In the visits of the Regional Medical Officer to the various states, three salient conclusions were evident:

1. The professional groups recognized civil defense needs.

2. The nursing groups in each of the seven states had done something about the matter—a 100 per cent finding.

3. While other individual groups had made plans, in no instance could it be verified that all groups had developed a coordinated plan. Doctors planned to use hospitals and hospital personnel, hospitals had planned to use physicians and nurses, and the nurses knew of both plans but did not know where they would eventually be needed.

As a result of these findings, the Committee was organized, with the intent that it furnish a professional nucleus for a review of the existing regional plan, that each state component would do the same for the state, and that each member would act as liaison between his association and the Region; that the state group would serve in an advisory capacity to the state director of health services and call in all ancillary health personnel, as needed, to develop the health services on a sound, participating and real basis. No one professional group can develop a civil defense health plan without advice, consultation, and active discussion with all participating health agencies that will be represented.

Achievements

What has this Committee done? One general regional meeting, was held in Atlanta, Georgia, on December 15, 1954. The second will be held in Atlanta on June 1, 1955. The first meeting was to orientate the members in FCDA policy and objectives, and included a discussion of the relationships between the American National Red Cross and FCDA. And may I digress for a moment? This relationship, which stems from the so-called general disasters and enemy attacks, is one of the most misunderstood that I know.

I can simplify it for you by the following description: In a natural disaster civil defense supplements the Red Cross, and is under its direction in their responsibility to individuals. Only when destruction of public property makes it necessary to invoke Public Law 875 does FCDA have a specific responsibility. In an enemy disaster as a result of an attack, the Red Cross supplements the FCDA, under FCDA direction. In general, the supplementing agency loses its identity in its supplemental role. The second meeting of this Committee in June will be for further orientation. Spokesmen from national organizations of the medical, hospital, dental, and nursing professions will review the concept of civil defense by these organizations, and representatives from each state will report on the present status of their respective health services programs. It is believed that with this background, the Committee, as a whole, will elect officers, develop future programs, emphasize the elements of the program to be concentrated on during the next six months, and as a cohesive, cooperative group provide a program that will fill the needs of the Region and for its respective states.

Individual activities to be reported are as follows: At the request of the Regional Medical Officer, meetings have been held with the state groups in four of the seven states. One state group meets monthly, and one state has been meeting every two weeks in order that each professional group could report to the others what it has done individually. At the conclusion of the series of meetings the Committee will correlate and coordinate the efforts of the component parts into a single unified effort. One state called a meeting of deans of the professional schools, presidents and executive secretaries of each professional organization, voluntary agencies, heads of state welfare departments, and so forth, for the purpose of appraising the needs and the type of organization required. They developed a basic approach, and further work is being carried on by individual committees which will report to the body as a whole on completion of their assignments.

May I emphasize that only in round table discussion with full participation by every representative health service can a sound program be developed. We may be able to regiment and order people after an atomic disaster, but until that time we are asking

individuals to volunteer for services which we hope will never be utilized. In our American way of life we must remember the needs of the people to participate, to have a sense of "belonging" and to be a party to planning, development and implementation.

The Role of the Physician

What is the role of the physician in the pre-attack phase?

1. He must keep up with the latest information as it becomes available.

2. He must accept an assignment in the local civil defense organization, acknowledge the assignment, and prepare to proceed to his station or to the alternates if the original station has been destroyed.

3. He must budget his time, already pressed as he is, in order to share with his local compatriots the responsibility for instructing the many lay volunteers, who may be his only assistants after the attack.

4. He must be released from administrative responsibilities.

5. He must be assured that the remainder of the civil defense services and planning are so complete that his wife and his children will know what to do and where to go at the time that he himself starts for his assignment, regardless of where he may be when the signal comes.

6. He must actively support the local stockpiling of needed medical supplies to cover the first hours—from 6 to 24—before the federal supplies can be transported to the stricken region.

7. He is one of the finest channels for disseminating civil defense information to his patients in the normal routine of his office and hospital practice—day or night.

Planned Approach

In closing I would like to outline to you as physicians the approach of the Regional Office to this problem. We have indicated the lack of professional personnel even in peace time. We have indicated the overwhelming case load in casualties alone in the event of an atomic attack. Every physician, dentist, veterinarian, and osteopath will be treating casualties in the first week, and very likely shock alone will be the only condition first treated. Actually, the timing of casualty care is assumed to be this: 1 to 18 hours, shock only; 18 hours to end of first week, reparative surgery; first week to three months, definitive care; and after

three months, rehabilitation. It is the belief of the Regional Office that one health agency provides all the necessities of a functioning program—the hospital. A trained hospital administrator who is used to working with professional and lay groups and to coordinating their efforts toward the best possible care of the patient is the natural head for any emergency health program. He has organized sections of physicians, nurses and nursing aides, technicians, and departments of his hospital. He has his hospital board and his volunteer workers, he has his hospital auxiliary, he has his own "hospital community," and he has access to the community as a whole. From the development under his responsibility of a disaster plan for his hospital, the extension of this plan to cover a national emergency from enemy attack is only a step.

Each professional group participating in Civil Defense maintains its own integrity, but each contributes to the over-all planning, development, and implementation of the program for the better care of the patient. The administrator's knowledge of personnel and personnel resources; of supplies and their procurement, storage and utilization; and of the utilization of space for the care of patients—fits him for making the utmost use of his own hospital and of improvised hospitals, and for working out arrangements for mutual aid and mobile support under various requirements. Such a person, as head of the health services, places the administration in trained hands and frees the professional personnel for the function they were trained to perform. Your thoughtful consideration of this basic approach is requested.

The teamwork of the physician, the hospital administrator, the dentist, the nurse, and the public health officer can meet the emergency needs at the state, county and local level. And each team from the seven states can direct the emphasis and planning for our Region. I suggest that this group meet around a common table, study the problem, review the resources, and develop the plan that will hold casualties to a minimum, render emergency care and treatment, and provide for emergency repair of facilities. To do this many other health services will, of necessity, be called in to assist in the formulation, the development, and the implementation of that plan.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

SEPTEMBER, 1955

SCIENTISTS APPEAL FOR ABOLITION OF WAR

Science for July 29 (pp. 189-190) has two noteworthy statements. The first is the full text of a declaration by nine of the world's most eminent scientists, released on July 9 by Bertrand Russell who had been nominated by the late Albert Einstein to draft it. The second statement, released July 15, was signed by eighteen Nobel prize winners at the end of the Fifth Annual Lindau Conference.

Both statements appealed to all nations to refrain from war as a means of settling disputes.

The first statement contained the gruesome thought: "... the best authorities are unanimous in saying that a war with H-bombs might quite possibly put an end to the human race.

"It is feared that if many H-bombs are used there would be universal death—sudden only for a minority; but for the majority a slow torture of disease and disintegration."

The statement concluded by urging that the scientists of the world and the general public also subscribe to the following resolution:

"In view of the fact that in any future world war nuclear weapons will certainly be employed, and that such weapons threaten the continued existence of mankind, we urge the governments of the world to realize and to acknowledge publicly that their purpose cannot be furthered by a world war, and we urge them, consequently, to find peaceful means for the settlement of all matters of dispute between them."

The second statement, by the eighteen Nobel prize winners from all parts of the world, was in similar vein. It stated that science offered a way to happy life, but had given mankind instruments to destroy itself. Its concluding sentence was, "All nations must come to the conclusion to refrain from the use of power as an ultimate means of statesmanship. If they won't do this they will cease to exist."

Certainly the nine scientists and the eighteen Nobel prize winners who drafted these statements cannot be considered alarmists. They are, however, living proof of a declaration in the first statement, "We have found that the men who know most are the most gloomy."

An editorial in this journal for January 1951* reminded its readers that more than a century ago the poet Tennyson had prophesied the use of airplanes, both for commercial and combat purposes. In the same poem he predicted a successful United Nations:

"Till the war drums throb'd no longer,
and the battle flags were furl'd
In the Parliament of man, the Federation
of the world.
Then the common sense of most shall hold
a fretful realm in awe,
And the kindly earth shall slumber,
lapt in universal law."

Is it too hard to believe that these modern eminent scientists are pointing the way to a fulfillment of Tennyson's final prophecy?

*"Locksley Hall"—One Hundred and Twenty-five Years After.

GOVERNMENT HEALTH INSURANCE IN JAPAN

Major Charles H. Reid of the U. S. Army Medical Corps, who is now stationed in Japan, recently sent an editorial from a Tokyo daily paper which indicates that all is not well with Japan's system of health insurance. Quoth the editor: "Because the deficit in health is expected, however, to reach 10 billion yen by the end of the year, a law for the revision of the health insurance system is being studied in the National Diet at present. Defects in the method of operation and in the system itself, are believed responsible for the huge deficit. Social insurance today, including health insurance, mainly covers people working for the government and business companies. It is estimated that people not applicable for medical insurance total 33.7 per cent of the population, or about 30 million people."

"It is necessary to spread the medical insurance system over a greater area so that most, if not all, of the people can be provided for. It may not be possible to do so at once, but it should be done. At the same time, there is the problem of doctors to carry out the medical insurance system."

Major Reid states that 10 million yen means as much to Japan as 10 million dollars would to the United States. And most people must agree with his conclusion that "the writer is obviously in favor of the Japanese system of socialized medicine; but I think any critical reader would be persuaded against the scheme by this article."

* * *

A RE-EVALUATION OF SULFONAMIDE THERAPY

In perhaps the most practical of the papers read in the excellent Symposium on Infection at the April session of the American College of Physicians, Dr. Ellard Yow, of Baylor University College of Medicine, told his audience not to forget the sulfonamides in their enthusiasm over penicillin and other antibiotics⁽¹⁾. Dr. Yow bases his advice upon a vast experience in the use of the sulfonamides. "During the past five years approximately 500,000 Gm. of sulfonamides have been used yearly at the Jefferson Davis Hospital." (page 327) During this period no cases of renal toxicity, agranulocytosis, or aplastic anemia have

been traceable to sulfonamide therapy, although transient and reversible leukopenia was not infrequent. Dr. Yow summarized the result of his long study of the sulfonamides as follows:

The development of the more soluble sulfonamides and the sulfonamide mixtures has virtually eliminated the most frequent of the serious toxic effects of the sulfonamides—the formation of crystals in the renal tubules producing hemorrhage and obstruction.

2. The frequency of the other undesirable side effects is probably in the same range as that seen in association with antibiotic therapy.

3. The sulfonamides are less potent antibacterial agents than the antibiotics, but also produce less drastic changes in normal flora of the body and the subsequent superinfections.

4. Sulfonamides are as effective as the antibiotics in meningococcal infections, bacillary dysentery, chancroid and trachoma. They are usually effective in most respiratory tract infections and in uncomplicated urinary tract infections.

5. The sulfonamides are of value in combination with the antibiotics in treating actinomycosis, pneumococcal meningitis, H. influenzae infections and Friedlander's infections.

6. The use of the sulfonamides in minor infections due to sensitive organisms may delay the development of antibiotic resistant strains of bacteria and reserve the more potent agents for serious infections.

Finally, a point of importance to the patient, the doctor and society is the cost of therapy. The average daily cost to the patient for sulfonamide therapy is approximately 50¢, as compared to \$2.00 for the tetracycline antibiotics.

1. Yow, E. M.: A Re-evaluation of Sulfonamide Therapy. *Ann. Int. Med.* 43:323-332 (Aug.) 1955.

* * *

THE PERSONAL EQUATION IN RESEARCH

An article in *Science* for September 3, 1954 (vol. 120, p. 359) by Lasagna and von Feisinger, "The Volunteer Subject in Research," was stimulated by an intriguing observation made in the course of certain pharmacologic studies on healthy young male volunteers. The authors made the point that it may be very difficult to get purely objective observations, and hence a truly normal baseline, in using volunteers for a given experiment. They found that of 56 students who volunteered for studies on certain drugs, 25 were psychologically maladjusted, according to the Rorschach test and the interview. The large proportion of maladjusted individuals among the volunteers led the authors to look for further light on the "volunteer factor" in similar statistical studies. They found in at least six other studies significant differences between the psychosomatic performance of volunteer

students and that of students required to take part in the experiment as part of their course.

Some of the reasons for volunteering were also of interest. Some of the students frankly volunteered for the money; others, because they hoped to find professional advice and help or a drug that might prove to be the key to their personality problems.

It is significant that many of the volunteers in at least two of the groups were found to have unconventional sex habits. In the case of the Kinsey report, this question is of particular significance. It gives point to the definition of a nymphomaniac found in Morris Fishbein's "Dr. Pepys' Pages"—"A yesnik. And what is a yesnik? Just Kinsey spelled backwards."

This study of the personal equation in subjects who volunteer for statistical studies raises the question as to how reliable such experiments really are.

* * *

DR. THURMAN D. KITCHIN

North Carolina lost one of her best known, best loved, and most useful doctors and citizens when Dr. Thurman Kitchin died of coronary disease at his home in Wake Forest early Sunday morning, August 28.

Dr. Kitchin came from one of North Carolina's most distinguished families. His father, William H. Kitchin, was a captain in the Confederate army and served for a long time in Congress. Two of his older brothers for many years had the unique distinction of being members of Congress at the same time—Will from the Fifth District, Claude from the Second. Will later became governor. Claude was majority leader of the House during Woodrow Wilson's administration.

None of his family, however, rendered greater service to the state than did Thurman. After he was graduated from Jefferson Medical College in 1908, he practiced in Lumberton for two years and in Scotland Neck for seven years before he joined the Wake Forest College faculty in 1917. In 1919 he was made dean of the Medical School, and from 1930 to 1950 was president of the college. When he became president the college was losing students and prestige. Although the Great Depression was well under way, he began quietly and modestly

a forward-looking program. His 20-year administration brought about a tremendous change. The *Greensboro Daily News* aptly entitled an editorial tribute to him, "He Pulled the Patient Through."

The *Biblical Recorder* for September 3 has well summarized his record as president:

Dr. Kitchin was president of Wake Forest College from 1930-1950, during which time he guided the college through depression, war, and a series of costly fires which destroyed and damaged college buildings . . .

Eight buildings and an athletic stadium were erected, enrollment increased more than 310 per cent; the two-year medical school was moved to Winston-Salem and set up as a four-year medical college after receiving resources from the Bowman Gray Foundation; Wake Forest became coeducational; the college acquired recognition from a number of national and regional agencies; the College Law School became standardized; the athletic standing was improved and in 1946 Wake Forest received an annual grant of \$350,000 from the Z. Smith Reynolds Foundation on condition the college move to Winston-Salem.

During the war years when enrollment dwindled to 310, Dr. Kitchin secured a government contract setting up an Army Finance School at the college. That move is credited with keeping the college open for the duration of the war.

Dr. Kitchin was loved by hundreds of his former students, as well as by his colleagues. In 1927 he was president of the Medical Society of the State of North Carolina. His presidential address "The Doctor and Citizenship," together with other addresses and essays by him, was later published in book form⁽¹⁾. The volume was dedicated "To my students, whose welfare in college has been my chief concern; whose success in after years has been my joy and inspiration."

Dr. Kitchin is survived by his wife, the former Miss Reba Clark, and by three sons. Thurman, Irwin and Walton. The youngest, Walton, is a surgeon in Clinton. To his wife, his sons, and his relatives, the NORTH CAROLINA MEDICAL JOURNAL on behalf of the doctors of North Carolina extends deepest sympathy—but also congratulates them on the proud heritage he has left.

1. "The Doctor and Citizenship," Boston, The Christopher Publishing House, 1931.

Dr. Kurtz Named Editor

Dr. Philip L. Kurtz has been named editor of *De Re Medica*, Lilly reference book on therapeutics and pharmacology for the medical profession. Last published in 1951, *De Re Medica* is undergoing revisions for future publication, and revised editions will be published periodically. Also, while S. O. Waife, M.D., is in military service, Dr. Kurtz will act as editor of the *Physician's Bulletin*, Lilly's monthly journal for the medical profession.

PRESIDENT'S MESSAGE

IN DEFENSE OF GOOD DOCTORS

Doctor, I'm sure, you are sick and tired of the almost constant stream of unwarranted criticism directed against the medical profession by uninformed and misguided critics who attack us with all the vicious schemes known to man. We are constantly hearing the charges of: (1) exorbitant fees, (2) ghost surgery, (3) fee splitting, (4) unnecessary operations, (5) failure to answer night calls, (6) incompetence, (7) neglect of duty, (8) failure to carry our load in all community and civic activities.

Too often for the doctor's comfort these days, the lament is directed, not at the cause of the ailment, but at the cost of the cure. No less a personage than the eminent columnist, Dorothy Thompson, recently chided the medical profession for these shortcomings. We must admit that such charges do apply to a small segment of the profession. This is not, however, just cause for condemning our entire noble profession.

Doctors everywhere are becoming alarmed. The thoughtful ones I know—and I know quite a few—are racking their brains for an answer to their rapidly increasing public relations problems. This is due chiefly to the unjust attacks upon us by those who display a shocking ignorance and gross ingratitude for the great humanitarian benefits good doctors give the public.

To overlook unjust criticism of this kind would be similar to paying no attention to a snakebite for which we have adequate anti-venom. These attacks on the medical profession are fostered by those who would rob us of our individual personality, usurp our states' rights, and confer them upon a socialistic regimen for their own selfish and political motives.

All but a few of those who come in contact with doctors soon learn the dignity of medicine. Let us remember that the criticisms of the world are often in error. The criticisms of your colleagues may also be in error, but ought, in any case, to be listened to. Our own self-criticism alone has a good likelihood of being right, and ought, therefore, to be a guide in all our professional life.

It was to protest against the sacrifice to economic considerations of human dignity,

individual personality, and the freedom and responsibility to plan our own lives that Jesus first appeared among men. His first enunciation to Satan's temptation to "make bread out of stone," was a complete refutation of this disgusting proposition. He said, "Man shall not live by bread alone."

Good doctors in the medical profession are the first to admit that a small percentage of our members are guilty of immoral, dishonest, and corrupt conduct. To describe the medical profession as being free of these sins would be similar to describing the "dust bowl" without the dust. We must not, as some in the profession do, attempt to whitewash them. I assure you that we cannot wash them white any more than our Lord could whitewash the original sin—a sin not against chastity, but against obedience. We must take our lesson from Him. He cast them out of the "Garden of Eden." We must cast them out of our profession. We need more discipline. The only kind of discipline worth one penny is self-discipline. A physician must fully realize that he cannot consider himself as an isolated individual, but rather as an important member of his profession, with the unusual opportunity, to exercise individual influence, not only in the profession, but in order that his profession may exert a more inspiring and potent influence in his community, state, and nation.

Our Board of Censors, the Mediation Board, and the Board of Medical Examiners of the State of North Carolina should be congratulated for the fine job they are doing in a supreme effort to clean house. This is being done by reprimand, probation, penalty, and revocation of license. These penalties are used more often than most of you think. With the help of every member in the Medical Society, these boards will do a far better job. It is just as much our duty to help in this problem as it is to treat sick patients, in order to protect the public. Our record in this regard will stand unmatched and unchallenged by any other group or profession in the state of North Carolina. With your help it will be even better. To paraphrase what Walt Whitman said years ago: "This society is you and me—all we do is you and me."

Under the Hippocratic Oath and our code of ethics, we are honor bound to keep out of controversy and to let our names be used only in unavoidable situations, like our too early obituary notices. Under this oath the doctors are stuck. May I exercise my prerogative in this message by saying that I myself am bound by nothing except the facts. I'd like to strike a blow for good doctors. By good doctors, I mean those who increase daily in knowledge and skill, and who possess an even more important attribute—a stringent conscience to guide them in their daily professional occupation.

First, I wish to quote verbatim from an editorial by Kinsley McWhorter, Jr. of Roanoke, Virginia, in the *World News*.

Two young men of equal talent graduate from college at twenty-two. One is an engineer and starts right out at a good salary and no other investment necessary. The second turns to medical school. Four years of hard study, followed by four more years of special training. By the time both are thirty, the engineer has already earned forty thousand to sixty thousand dollars. The medical student has spent three to four thousand dollars a year to get more education. They've reached the age of thirty some sixty to seventy-five thousand dollars apart. If the medical man then begins to earn excellent money, is that fair?

From personal observation I would have to give an unqualified and resounding yes, if his fees are tempered to meet the economic status of the individual. No other practitioner of any art or science spends so much time in studying as a fully qualified physician or surgeon. No other expends so much financially to achieve his goal. No other spends himself so freely.

Mr. McWhorter goes on to say: "The problems of the medical men are, I think, beyond the grasp of 95 per cent of the people. I have learned them only slightly in a life-time of acquaintance with doctors and in a bitter past year spent mostly in their kind and capable hands."

People cry loud and long over the "good old days," when one family doctor did it all "from the cradle to the grave." It is still true today that the family doctor can and does render adequate medical care to many patients without the aid of a specialist. He is the key man in the treatment of sick people. Our critics bitterly assail the specialization and high cost of medical care, knowing that specialists are necessary too. Our family doctors are the first to recognize the need for a specialist. If people would rely on their sound judgment, the cost of medi-

cal care would go down. The family doctor, however, rightly and justly resents being bypassed by those patients who seek the advice of a specialist in "fair-weather, and use the doctor only in emergency and night calls. "A true friend walks in when others walk out."

The Jack-of-all-trades is no more. Our machinery is too complex. The bodily machinery is complex too. It is the most complex mechanism in the world. To keep it running, the best men with the most infinite patience and the longest training are required. Have those who complain of medical fees called a plumber, a TV repairman, a painter, or a mechanic lately? A pretty big bill, wasn't it? Should the doctor get less?

We must not shrink or cringe from criticism. It must be answered sincerely and honestly. Most of the criticisms I hear remind me of the man who complained because he had no shoes until he met a man who had no feet.

JAMES P. ROUSSEAU, M.D.

BULLETIN BOARD

COMING MEETINGS

Sixth District Medical Society and Auxiliary Meeting—State Hospital, Butner, October 5.

Tenth District Medical Society Fall Symposium—Asheville, October 12.

Postgraduate Course in Anesthesia—co-sponsored by Duke University and North Carolina Society of Anesthesiologists, Duke University, October 20-22.

North Carolina Academy of General Practice, Seventh Annual Scientific Assembly—Hotel Charlotte, October 16.

Duke University Medical School, Twenty-Fifth Anniversary Observance and Alumni Reunion—October 21-22.

North Carolina Division, American Cancer Society, Annual Meeting and Medical Seminar—Hotel Charlotte, October 23.

Raleigh Academy of Medicine, Seventh Annual Medical and Surgical Symposium—Sir Walter Hotel, Raleigh, October 27.

Duke University Postgraduate Cruise—M.S. Stockholm, November 3-December 5.

Academy of Psychosomatic Medicine, Second Annual Meeting—New York City, October 6-8.

American College of Chest Physicians, Eighth Annual Postgraduate Course—New York City, November 14-18.

American College of Gastroenterology, Annual Convention—The Shoreland, Chicago, October 24-26.

Southern Medical Association, Forty-Ninth Annual Meeting—Houston, Texas, November 14-17; Post-Convention Tour of Mexico, leaving Houston, November 18.

Note: The University of North Carolina Postgraduate Program on General Surgery, previously scheduled for November 28-30, has been changed to Monday and Tuesday, November 21 and 22.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Dr. Deryl Hart, professor of surgery at the Duke University School of Medicine, completed 25 years as chairman of the Department of Surgery this summer. On October 20, his former residents will celebrate his twenty-fifth anniversary at a banquet, at which time his portrait will be presented to the University. Dr. W. C. Davison, dean of the Duke University School of Medicine since its foundation in 1930, will be the speaker.

* * *

Dr. Leonard H. Schuyler, a graduate of the Duke University Medical School, has just been appointed assistant medical director of the American Heart Association.

Formerly a research fellow in medicine at the Vascular Research Laboratory of the New York Hospital-Cornell University Medical School, he will aid in administration of the research support and professional education programs of the Association.

He received the M.D. degree at Duke in 1950 and also received a Mosby Award, given annually to each of the five best seniors. During World War II he served as bacteriologist with the 65th General Hospital, a North Carolina unit affiliated with the Duke Medical School.

MEDICAL SEMINAR AT CANCER MEETING

Dr. Cornelius P. Rhoads, director of Sloan-Kettering Cancer Institute, New York, and formerly director of Memorial Hospital, New York, heads the list of speakers for the medical seminar to be held in conjunction with the annual meeting of the American Cancer Society, North Carolina Division, in Charlotte, October 23-24. Announcement of the seminar is made by Dr. John R. Kernodle, Burlington, chairman of the medical sessions.

The scientific program begins at 2 p.m., Sunday, October 23, Hotel Charlotte. All physicians of the state are invited.

A round-table presentation on "Cytology of the Cervix" will also be featured, with papers by four specialists in the field, and opportunities for open discussion.

EDGECOMBE-NASH MEDICAL SOCIETY

The Edgecombe-Nash Medical Society met in Rocky Mount on Wednesday evening, September 14. Dr. John Whaley was in charge of the program and introduced as guest speaker Dr. Mitchell Sorrow of the Department of Cardiology, Memorial Hospital, Chapel Hill.

At the August meeting Dr. J. H. Cutchin presented Dr. Daniel L. Donovan of Memorial Hospital, Chapel Hill, who discussed "The Relationship of Experimental Diabetes to Clinical Medicine."

FORSYTH COUNTY MEDICAL SOCIETY

The monthly meeting of the Forsyth County Medical Society was held in Winston-Salem on September 13. Dr. Edward Cawley, professor of dermatology at the University of Virginia, addressed the group on "Cutaneous Virus Infections."

NEWS NOTES

Dr. William McCall, Jr., has announced the opening of his offices for the practice of internal medicine at 414 Nissen Building in Winston-Salem.

Dr. Donald L. Whitener has opened offices for the practice of obstetrics and gynecology at 612 West Fifth Street in Winston-Salem. He will be associated with Dr. F. L. Gobble, Jr.

SOUTHERN MEDICAL ASSOCIATION

The Southern Medical Association, the nation's second largest general medical organization, will hold its forty-ninth annual meeting in Houston, Texas, on November 14-17, 1955. All programs will be held in the fabulous Shamrock.

The Scientific Assembly of the Southern Medical Association is one of the nation's outstanding postgraduate events for practicing physicians. The intensive work of the Scientific Assembly will feature some 300 papers by outstanding researchers and practitioners in all of the major medical and surgical fields. The following sections will hold from one to three sessions: Anesthesiology, General Practice, Gastroenterology, Medicine, Surgery, Neurology and Psychiatry, Pathology, Proctology, Urology, Gynecology, Obstetrics, Public Health, Industrial Medicine and Surgery, Pediatrics, Allergy, Radiology, Dermatology and Syphilology, Physical Medicine and Rehabilitation, Orthopedic and Traumatic Surgery, Ophthalmology and Otolaryngology.

In addition to the 20 sections of the Association, several other major specialty groups will meet conjointly. Among those planning programs in Houston are: American College of Chest Physicians—Southern Chapter, Association for Research in Ophthalmology, Southern Gynecological and Obstetrical Society, Women Physicians, and the Southern Society of Cancer Cytology.

More than 200 technical and scientific exhibits will be housed in the Exhibit Hall of The Shamrock—readily accessible to the meeting rooms.

The general registration desk will be located in the entrance of the Exhibit Hall. Special desks will be provided for the use of the sections, alumni groups, and conjoint societies for information, tickets, and so forth.

The Association has a Housing Bureau, Box 1267, Houston, Texas, to which all requests for hotel accommodations should be addressed. A formal hotel reservation form appears in every current issue of the *Southern Medical Journal* and will also be attached to the Preliminary Program which will be mailed to 37,500 physicians in the South.

There will be two General Sessions of the membership. The Opening Assembly, open to the public, will be held in The Emerald Room of The Shamrock on Monday, November 14, at 10:30 a.m. President of the Association Robert L. Sanders, M.D., of Memphis, Tennessee, will deliver the annual presidential address. His subject will be "Values in the Practice of Medicine." Following Dr. Sanders, Dr. Francis P. Gaines, president of Washington and Lee University, special guest of the president, will speak on "The Range of Loyalty."

The second General Session will be held in The Emerald Room of The Shamrock on Wednesday evening at 7:00 p.m. This session, known as the Annual Dinner and President's Night, will be highlighted by the election of officers, installation of W. Raymond McKenzie, M.D., of Baltimore, Maryland, the incoming president; the presentation of the past president's medal to R. L. Sanders, M.D.; the presentation of awards; and professional entertainment followed by the annual dance.

The thirty-second annual golf tournament will be held at the Lakeside Country Club on Tuesday and Wednesday, November 16-17. Three major trophies are to be awarded—The *Daily Oklahoman*

and Times Cup, in play since 1938; The Miami Daily News Cup; and the Dallas Morning News Cup, in play since 1925.

The Woman's Auxiliary of the Association will also hold its Annual Session during the same dates with headquarters in the Rice Hotel.

The official post-convention tour to Mexico City will leave Houston by air on Thursday afternoon for a 10-day tour of Mexico. The tour, arranged by the International Travel Service, Inc., of Chicago, will be personally escorted by Mr. Frank E. Smith, former executive director of the Blue Shield Commission. Tour information will be mailed to members and will appear in the *Journal* and Official Program.

ACADEMY OF PSYCHOSOMATIC MEDICINE

The Academy of Psychosomatic Medicine will hold its second annual meeting on October 6, 7, and 8, 1955, at the Plaza Hotel in New York City. The subject of this year's Scientific Program is "The Psychosomatic Aspects of Drug Administration." There is no registration fee. Guests may attend the banquet.

Speakers include the following: Lester L. Coleman, M.D., who will talk on "Wonder Drugs—A Psychosocial Phenomenon"; Harry Kozol, M.D., discussing "Epilepsy: Modern Treatment with Drugs as a Keystone of Psychosomatic Method"; George B. Koelle, M.D., presenting "The Clinical Neuro-pharmacology of Mescaline and D-lysergic Acid"; Joseph E. F. Riseman, M.D., commenting on "Experiences with Placebos in the Treatment of Angina Pectoris"; Mark D. Altschule, M.D., presenting "Ideas About the Metabolism of Epinephrine"; and M. Murray Peshkin, M.D., discussing the "Psychosomatic Aspects of Drugs in Allergy Practice."

A preliminary program can be obtained from the secretary, Ethan Allan Brown, M.D., 75 Bay State Road, Boston, Massachusetts. Reservations should be made directly with the Hotel, and a carbon copy sent to the secretary's office.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

Assistance Grants Offered for New Medical Practices

A helping hand to physicians in need of financial assistance to establish medical practice units is being offered by the Sears-Roebuck Foundation in cooperation with the American Medical Association. Since young physicians often lack capital and business "know-how," this plan is intended to fill the gap with long-term, low-cost assistance. Unsecured 10-year loans of up to \$25,000 will be offered to physicians seeking to establish practices but unable to get full local financing. One loan in each of five regions in the country will be given in 1955 under an original \$125,000 Foundation grant.

Especially planned for small or medium-sized towns and growing or rural communities, the program is designed to be self-expanding. All repayments will be used for further grants.

Applications will be screened by a medical advisory board which has been appointed from nominations by the A.M.A. Board of Trustees. Each applicant must submit information about the area where he intends to locate, indicating the need for medical care, medical resources already available, possible reasons for the success of a new practice, and benefits expected for the community.

State medical society physician placement services will play a major role in getting the program started. The plan, formulated by the recently creat-

ed medical advisory board, is headed by two members-at-large: Dr. F. J. L. Blasingame, Wharton, Texas, chairman, and Dr. Edwin S. Hamilton, Kankakee, Illinois, vice chairman, and a number of regional members, including Dr. David Henry Poer, Atlanta, from the South.

Applications from the Southern region should be addressed to the Director, Sears-Roebuck Board, 675 Ponce de Leon Avenue, Atlanta.

* * *

Farm/City Week Scheduled for October 23-29

Local medical societies are being urged by the American Medical Association to help build better relationships between farm and city groups by participating in the observance of the Farm/City Week, October 23-29. During this week, member organizations of the Farm-City Conference (an alliance of leaders in industry, agriculture and the professions) are collaborating on a program designed to promote mutual understanding between town and rural people of their economic problems and civic responsibilities. This week provides an excellent opportunity for a medical society to assert its civic leadership and to inform the public of its many services.

Here are several ways in which your society can contribute to the success of this plan: (1) Develop health education programs for city and rural youth groups; (2) schedule addresses by society members to civic groups; (3) plan radio and television interviews and discussions; (4) arrange tours of hospitals, clinics and other facilities by farm and city groups, and (5) instigate vocational guidance programs in secondary schools.

Call your local Kiwanis Club to coordinate your program into the community-wide observance. If no club exists in your area, the Farm-City National Committee requests your society and other interested groups to initiate the leadership in planning for Farm/City Week.

* * *

A.M.A. Offers New TV Aids

Two new television "scripts-with-film" programs featuring current health education information on the eye and its functions will be released this fall by the A.M.A. Prepared with the cooperation of the A.M.A.'s Bureau of Health Education and the National Society for the Prevention of Blindness, these shows are designed so that a local physician can narrate while the film is thrown on the television screen.

The programs are: (1) "A Clear Picture"—which deals with the eye and its functions; (2) "Wonderful Spectacle"—which describes the functions of glasses and lenses. The programs are so constructed that they can be used as separate 15-minute programs or together as a single 30-minute presentation. The film demonstrator is Dr. Brittain F. Payne of New York City, noted ophthalmologist.

Both films and accompanying scripts will be available about September 15 through the A.M.A. TV Film Library. There is no charge to medical societies.

Winners Announced In "Today's Health" Contest For Auxiliary

Congratulations are due the winners of the Today's Health 1954-1955 Woman's Auxiliary subscription contest. The fifty dollar grand prize for the group securing the largest total number of subscriptions was awarded to the Dade county (Miami, Fla.) woman's auxiliary under the leadership of its Today's Health chairman, Mrs. D. C. Daughtry. The awards were presented during the Today's Health Workshop June 6 at the national Woman's Auxiliary convention in Atlantic City.

AMERICAN MEDICAL EDUCATION FOUNDATION

Effective August 31, Hiram W. Jones has resigned as executive secretary of the American Education Foundation to accept a position as assistant to the president of Diagnostic and Treatment Building Corporation of America, a management consultant organization. Mr. Jones has directed the development of the foundation since 1952. In his new capacity he will continue to work in the medical field, but will utilize much of the management training for which he had earlier preparation. This opportunity came to him at a time when the continued growth of the foundation was assured, and his departure would not handicap its future progress.

Mr. John W. Hedback, associate executive secretary, will assume the responsibilities of the present program until the Board of Directors meets to decide the future organization of the foundation.

Miss Margaret Egan, director of women's activities, will continue to work closely with the Women's Auxiliary to the American Medical Association, and help them construct a program which will support the A.M.E.F. during the new season of 1955-1956.

AMERICAN COLLEGE OF GASTROENTEROLOGY

The Annual Convention of the American College of Gastroenterology will be held at The Shoreland in Chicago, Illinois on October 24, 25, and 26, 1955.

In addition to interesting individual papers on gastroenterology and allied fields, the program will include a panel discussion on "Peptic Ulcer," with Dr. Clifford J. Barborak as moderator. There will be scientific as well as commercial exhibits.

The annual course in postgraduate gastroenterology, under the personal direction of Dr. Owen H. Wangenstein of Minneapolis, Minnesota, and Dr. I. Snapper of Brooklyn, New York, will be given on October 27, 28, and 29, 1955, at The Shoreland. Participating in the course will be a distinguished faculty from the various medical schools.

The scientific sessions on October 24, 25, and 26 are open to all physicians without charge. The postgraduate course will only be open to those who have matriculated in advance.

Copies of the program and further information concerning the Postgraduate Course may be obtained by writing to: American College of Gastroenterology, 33 West 60th Street, New York 23, New York.

NATIONAL MULTIPLE SCLEROSIS SOCIETY

Frederick L. Stone, Ph.D., assistant for professional services to the vice chancellor, School of the Health Professions, University of Pittsburgh, and a member of the Executive Committee of the Medical Advisory Board of the National Multiple Sclerosis Society, has been appointed director of the Society's Medical and Scientific Department, as of September 1, 1955, it was announced recently by Ralph C. Glock, president.

Dr. Stone's primary responsibility will be to develop expanded research and medical programs. In his new capacity, he will also administer all research grants and fellowships.

AMERICAN HEARING SOCIETY

Of interest to secondary school officials and teachers is an article "Teaching About Hearing," by Rose V. Feilbach (Mrs. Ralph Broberg), hearing conservation specialist for public schools, Arlington County, Virginia, being distributed in reprint form by the American Hearing Society.

"Teaching About Hearing" was reprinted with permission of the *Journal of Health—Physical Education—Recreation*, magazine of the Association for Health, Physical Education, and Recreation, a department of the National Education Association.

Another new reprint is "I Hear Better in the Light," by Martha A. Congress, of Washington, a hard of hearing woman who has adjusted to loss of hearing through the help of lipreading and a hearing aid. This article appeared in a recent issue of *Hearing News*, the society's publication.

Copies of the reprints may be obtained for 10 cents each by writing to the American Hearing Society, 817—14th Street, N. W., Washington 5, D. C.

THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

The National Foundation for Infantile Paralysis today took the unprecedented action of calling upon its 3,100 local chapters to turn in all their surplus funds so that the nation's polio program may "survive."

The action came as Basil O'Connor, president of the National Foundation thanked Americans for contributing a gross of \$52,511,185.69 to the 1955 March of Dimes last January, but added that this amount fell approximately \$12,000,000 short of the need, "despite your determined efforts."

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY, INC.

Applications for certification for the 1956 Part I Examinations are now being accepted. Candidates making application or requesting the reopening of an application must do so before October 1, 1955. Applications are to be accompanied by a list of hospital admissions as outlined in the current Bulletin of the Board.

The next scheduled examination (Part I), written examination and review of case histories, for all candidates will be held in various cities of the United States, Canada, and military centers outside the continental United States, on Friday, February 3, 1956.

Current Bulletins are now available and may be obtained by writing to: Robert L. Faulkner, M.D., Secretary, American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

CALEB FISKE FUND

The trustees of what is considered America's oldest medical essay competition, the Caleb Fiske Prize of the Rhode Island Medical Society, announce as the subject for this year's dissertation "Use of Radio-Active Isotopes In The Treatment And Investigation of Disease." The dissertation must be typewritten, double spaced, and should not exceed 10,000 words. A cash prize of \$350 is offered.

For complete information regarding the regulations write to the Secretary, Caleb Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence 3, Rhode Island.

JOURNAL FOR RESIDENT PHYSICIANS LAUNCHED

Resident physicians are probably the last remaining group of physicians who have had no special journal of their own. Yet the resident has a great many problems which differ materially from those of either the practicing specialist or the intern. To fill this void in medical literature a new journal, *Resident Physician*, makes its bow with the September issue. It will be edited by Perrin H. Long, M.D., and a distinguished board of editors from leading medical schools and hospital centers.

The editorial content of *Resident Physician* will consist of original articles geared especially to residents' educational, economic, and personal problems within and outside the hospital. Its main editorial aim is to make the resident a better house officer, and generally provide him with the economic information that he is neither taught nor given in his specialty journals.

Among the articles scheduled for early publication are:

"Is Private Ward Service Necessary?," "How to Manage a Ward," "Fellowships for Residents," "Tips or No Tips," "Preparing for State and Specialty Board Examinations," and "How to Gain Fullest Cooperation from the Hospital Administration."

AMERICAN COLLEGE OF SURGEONS

The medical profession at large is invited to attend any of six Sectional Meetings of the American College of Surgeons, to be held in cities throughout the United States and Canada during 1956. Meeting cities are Jacksonville, Florida, January 16-18; Philadelphia, Pennsylvania, February 13-16; Milwaukee, Wisconsin, February 27-29; Colorado Springs, Colorado, March 5-7; Little Rock, Arkansas, March 12-13; Edmonton, Alberta, April 23-25.

These meetings, like the five-day annual Clinical Congress, are designed for the purpose of disseminating information about new methods and therapies. In these programs the College draws on surgeons of outstanding ability, acting as teachers, to focus attention on problems encountered in day-to-day practice. Panels, symposia, papers and medical motion pictures of greatest value to doctors practicing in the area are presented.

Advance plans for each meeting are noted in the attached brochure. Further information may be obtained from Dr. H. Prather Saunders, Associate Director, American College of Surgeons, 40 East Erie Street, Chicago 11, Illinois.

AMERICAN COLLEGE OF RADIOLOGY

Of 180 patients with thyrotoxicosis, seen from 1947 through 1952, almost 80 per cent were relieved of their thyrotoxic symptoms following an initial dose of Iodine 131—and in more than 97 per cent, thyrotoxicosis disappeared after one or more treatments.

A Philadelphia radiologist has made that report in a recent (June, 1955) issue of *Radiology*. He is Dr. Richard H. Chamberlain, chief of radiation therapy for the University of Pennsylvania Hospital.

"Untoward reactions to treatment were infrequent and usually mild in this series. Fourteen patients complained of moderate to severe sore throats one to two weeks after treatment. General reactions consisting of exacerbation of thyrotoxicosis or precipitation of cardiac complaints have been less common but were serious when they occurred," Dr. Chamberlain explained.

(BULLETIN BOARD CONTINUED ON PAGE 462)

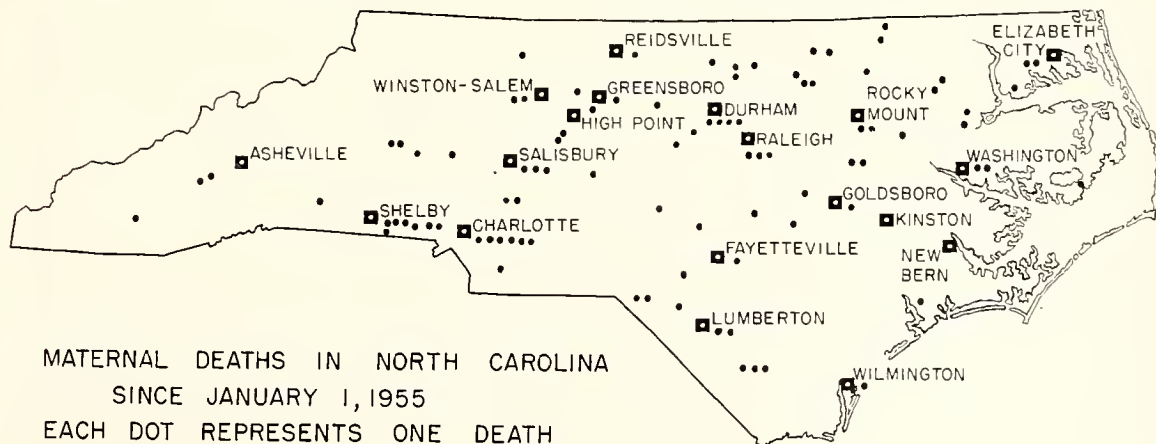
New Anticholinergic Preparations

Two dramatic new anticholinergic preparations, each bringing 12-hour relief—day or night—for sufferers of peptic ulcer, hypersecretion and spastic conditions of the gastrointestinal tract have been introduced to the medical profession by Smith, Kline & French Laboratories.

Trademarked 'Prydon' Spansule capsules and 'Prydonnal' Spansule capsules, the new SKF products represent the latest additions to the firm's growing line of sustained release medications. Rather than requiring adherence to a rigid t.i.d. or q.i.d. dosage schedule, a single 'Prydon' or 'Prydonnal' Spansule capsule provides an uninterrupted antisecretory and antispasmodic effect that lasts throughout the sleeping hours or over the patient's entire active day.

In addition, Smith, Kline & French said clinicians have noted that the usual side effects of anticholinergic therapy that come with the abrupt therapeutic peaks of t.i.d. and q.i.d. dosage schedules (dryness of mouth, blurring of vision, etc.) are reduced or eliminated through the gradual, even release action of 'Prydon' Spansule capsules and 'Prydonnal' Spansule capsules.

Available in bottles of 30, both 'Prydon Spansule capsules (in two dosage strengths 0.4 and 0.8 mg.) and 'Prydonnal' Spansule capsules have just been distributed to the drug trade.



The Month in Washington

Although very little health legislation actually was enacted in the first session of the Eighty-fourth Congress, a number of important bills made enough progress to insure they will get serious consideration when the second session starts next January.

Foremost is a bill to amend the social security act, and, among other things provide OASI payments for disabled workers after the age of 50. The present provision (enacted in 1954) protects a disabled worker's pension so it is not decreased because of his years of unemployment, but payments don't begin until he reaches 65.

The new plan, sponsored by Democratic members of the House Ways and Means Committee, was rolled through the House after closed committee hearings. But when it got to the Senate, Chairman Harry Byrd of the Finance Committee held it up, saying it was too important to be reported out without the complete hearings he plans for next session.

The American Medical Association is flatly opposed to cash disability insurance. One important reason is the Association's conviction that federal machinery necessary to regulate disability examinations inevitably would project the government into the medical care field. There are many other reasons, including the relationship between cash payments for disability and the patient's interest in rehabilitation. The issue of disability pensions will be settled next year in the Byrd Committee or on the Senate floor.

A bill for \$90 million in grants for building and equipping non-federal research facilities passed the Senate, and is awaiting action in the House Interstate and Foreign Commerce Committee. Hearings have been held on a bill for U.S. grants to medical schools and on another (Jenkins-Keogh) to allow self-employed persons to defer income tax payments on part of their income put into annuities.

Other bills that will be ready for action in January include legislation to stimulate nursing education, improve the medical care of military dependents, authorize health insurance for government workers, authorize

U. S. guarantee of mortgages on health facilities, and offer military scholarships. The administration's bill for reinsuring health insurance plans by now is a little shopworn, but it still might be pushed again next year.

President Eisenhower has made it known he wants Congress to get to work on health legislation early next session. His urging might not be needed. Next year is a presidential election year, and both parties will exert themselves to enact, and take credit for, new health programs that carry public appeal.

Despite the hundreds of hours of hearings in Senate and House, not a single important permanent medical program was set up by Congress in the last session. A national mental health survey, supported by the A.M.A., was enacted, but the administration's plan for mental health will be up for action next year.

Ignoring protests of physicians and dentists, Congress extended the doctor draft act for another two years, after first adopting two amendments. It exempted all men over 45, and all 35 or older who previously had been rejected for medical commissions for physical reasons alone.

For almost four months Congressional committees pondered what to do about Salk poliomyelitis vaccine. At first there were two main questions: 1. How much money should Congress spend to buy vaccine for free shots, and who should get them? 2. How far should the federal government move into the picture to insure equitable allocation?

One of the proposals — this even got through the Senate — was to offer unlimited money to the states, which in turn could give free shots to any persons or group of persons under age 20. President Eisenhower's idea — which he urged on Congress several times — was simply to insure that no person in need of the vaccine would go without it for financial reasons. Eventually his view prevailed and the states now are drawing on a \$30 million fund. This law expires next February 15.

As weeks passed, there was less and less enthusiasm for setting up a federal allocation system, which Secretary Hobby and Surgeon General Scheele repeatedly told Congress wasn't needed. Consequently, when the National Foundation announced it had all the vaccine it needed for its program, a voluntary allocation plan was put in effect.

TRANSACTIONS OF THE AUXILIARY to the Medical Society of the State of North Carolina

THIRTY-SECOND ANNUAL SESSION

Held at Pinehurst, May 3, 1955

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	Mrs. W. C. Piver, Jr., Washington
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	Mrs. James B. Lounsbury, Wilmington
N. C. Woman's Council—	
	Mrs. C. T. Wilkinson, Wake Forest
Nominations—	
	Mrs. Roscoe D. McMillan, Red Springs
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	Mrs. Joseph Smith, Gastonia
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	Mrs. Charles M. Norfleet, Jr., Winston-Salem
Program.....	Mrs. Charles Gay, Charlotte
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	Mrs. Edgar T. Beddingfield, Stantonsburg
Scrapbook.....	Mrs. L. J. Parsons, Lumberton
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	Mrs. Roscoe D. McMillan, Red Springs
Today's Health.....	Mrs. James D. Whaley, Hickory
McCain Bed.....	Mrs. R. A. Matheson, Raeford
Stevens Bed.....	Mrs. William Ray Griffin, Asheville
Cooper Bed.....	Mrs. William G. Spencer, Jr., Wilson
Yoder Bed.....	Mrs. W. L. Kirby, Winston-Salem

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Milton S. Clark, M.D.....	Goldsboro
Annie Louise Wilkerson, M.D.....	Raleigh

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1951.....	Mrs. Harry L. Johnson, Elkin
1952.....	Mrs. B. Watson Roberts, Durham
1953.....	Mrs. Roscoe D. McMillan, Red Springs
1954.....	Mrs. Gilbert M. Billings, Morganton

†Deceased

CONVENTION COMMITTEES

General Chairman—Mrs. C. E. Gardner.....	Durham
Co-Chairman—Mrs. C. T. Wilkinson.....	Wake Forest
Information Desk (Monday)—Mrs. James Wright.....	Raleigh
(Tuesday)—Mrs. Deryl Hart.....	Durham
Golf—Mrs. Michael Pishko.....	Pinehurst
Bingo Party—Mrs. George Heinitsch.....	Southern Pines

General Meeting—Mrs. Lee Sanders	Raleigh
Co-Chairman—Mrs. Robert Williams	Raleigh
Executive Board Luncheon	
Mrs. G. M. Billings, Chairman	Morganton
Mrs. Roscoe D. McMillan	Red Springs
Mrs. B. Watson Roberts	Durham
Fashion Show—Mrs. Ralph Garrison	Hamlet
Tea—Mrs. J. S. Hiatt	Southern Pines
Bridge—Mrs. William F. Hollister	Southern Pines
Exhibit—Auxiliary Materials—Aids and Ideas	
Mrs. John C. Reece, Chairman	Morganton
Special Guests—Mrs. William P. Richardson	Chapel Hill

CONVENTION PROGRAM

Sunday, May 1, 1955

8:00 P.M.—Memorial Service for departed Medical Society and Auxiliary members.
(Ball Room)

Mrs. Charles T. Grier, Chairman,
Auxiliary Memorial Committee

Monday, May 2, 1955

9:00 A.M.—1:00 P.M.—Golf Tournament—Pinehurst Country Club—*Doctors' Wives* only—First Prize low gross—Second Prize low net. Mrs. Michael Pishko, Chairman

10:30 A.M.—Finance Committee—Dutch Room

11:30 A.M.—Executive Committee—Dutch Room

2:30 P.M.—Executive Board Meeting—Village Chapel

9:00 P.M.—Bingo Party—Pine Room—One dollar for the evening. Valuable prizes. Any money left after expenses will be used for our Sanatoria Bed Projects. MEN WELCOME!

Mrs. George Heinitsh, Chairman

Tuesday, May 3, 1955

9:00 A.M.—Annual Meeting of the House of Delegates (Open). County Presidents, Councilors and Committee Chairmen are urged to be present. (Pine Room)

10:45 A.M.—Intermission — Coca-Colas will be served. Mrs. Lee Sanders, Chairman, Mrs. Robert Williams, Co-Chairman

11:00 A.M.—Annual General Meeting

12:00 Noon—Installation of Officers

12:15 P.M.—Adjournment

1:00 P.M.—Executive Board Luncheon — Pinehurst Country Club — Honoring Mrs. Clark Bailey, Harlan, Kentucky, Regional Vice President of the Woman's Auxiliary to the American Medical Association

3:00 P.M.—Fashion Show and Tea — Pinehurst Country Club—Fashions by Kay's of Rockingham. Tickets may be purchased at the Country Club on admission — price fifty cents. Refreshments compliments of the Medical Society of the State of North Carolina. Buses will leave the Carolina Hotel at 2:30 P.M. Mrs. Ralph Garrison and Mrs. J. S. Hiatt, Jr., Chairmen.

7:00 P.M.—President's Dinner—Carolina Hotel Dining Room

10:00 P.M.—President's Ball — Ball Room—Entertainment—Floor Show

Wednesday, May 4, 1955

9:00 A.M.—Woman's Auxiliary Breakfast—Honoring Mrs. Louis K. Hundley, Pine Bluff, Arkansas, President of the Auxiliary to the Southern Medical Association. (Crystal Room)

10:00 A.M.—Bridge Party—Large Card Room — Valuable prizes
Mrs. William F. Hollister, Chairman.

MEETING OF THE EXECUTIVE BOARD

Monday, May 2, 1955

The Executive Board of the Auxiliary to the Medical Society of the State of North Carolina met Monday, May 2, 1955, at 2:30 p.m. in the Village Chapel, Pinehurst. The meeting was called to order by the president, Mrs. Powell G. Fox, Raleigh. The invocation was given by Mrs. Charles T. Grier, Carthage. In the interest of time, a motion to dispense with the reading of the minutes and roll call was made and passed.

Mrs. G. M. Billings, Morganton, called attention to the luncheon on Tuesday for board members and county presidents.

Mrs. Fox announced that the Executive Committee had secured Mrs. Robert D. Croom, Jr., Maxton, to serve as incoming president in the place of Mrs. Roland S. Clinton, Gastonia, who found it necessary to resign as president-elect. In making her report, Mrs. Croom expressed her sympathy to Mrs. Clinton in the loss of her husband. She stated that letters have been written to prospective chairmen in each district and that nine chairmen had already been secured. She expressed her gratitude to Mrs. Fox, Mrs. Clinton, and Mrs. McMillan for their encouragement and help.

Mrs. Fox announced that it had been pointed out to her that the name "Postconvention Breakfast" was actually a misnomer, and that the breakfast should be designated by a more appropriate title.

Mrs. Joseph Hiatt announced that the fashion show to be given on Tuesday following the luncheon would be presented by Kay's of Rockingham and that a charge of 50 cents, in addition to the price of the luncheon tickets, would be made.

Mrs. J. M. Hitch, treasurer, requested that the second vice president, Student Loan Fund and Bed Fund chairmen meet with her at the end of the meeting.

Reports of officers followed. Since reports of all standing and special committees, except Doctors' Day, Awards, and Memorials, had been mimeographed and sent to all delegates and board members, and would be published in the September issue of the *North Carolina Medical Journal*, it was moved, seconded and passed that these reports not be read.

The treasurer, Mrs. J. M. Hitch, Raleigh, read her report, which was accepted.

At this point Mrs. Fox asked the first vice president, Mrs. Billings, to take the chair while she left to give her report to the House of Delegates of the Medical Society of the State of North Carolina.

Mrs. Roscoe D. McMillan, Student Loan Fund chairman, amended her report to include \$123.00 for the current year, bringing the total amount to \$2,431.32.

Mrs. Ben Royal, Morehead City, Doctors' Day chairman, read her report. She stated that 33 auxiliaries had reported on the observance of Doctors' Day and cited the various means by which the public was made "aware of the contribution of the medical profession to the abundance of life, and the individual doctor was made conscious of being loved and appreciated." She stated that all reports were good. In addition, the Greensboro Branch of the Guilford County Auxiliary was given special commendation for the form of its report as well as the activities involved.

Mrs. Charles T. Grier, Carthage, presented the following report for the Memorials Committee. The names of the departed members reported since May, 1954, are: Mrs. G. C. Beard, Atkinson; Mrs. George W. Black, Charlotte; Mrs. R. Payne Beck-

with, Roanoke Rapids; Mrs. Charles R. Bugg, Raleigh; Mrs. J. B. Carlyle, Burlington; Mrs. F. L. Carpenter, Statesville; Mrs. Ernest Lee Cox, Sr., Jacksonville; Mrs. Robert T. Ferguson, Charlotte; Mrs. Eugene D. Hardin, New Bern; Mrs. B. E. Love, Roxboro; Mrs. James R. Morrison, Statesville; Mrs. Henry B. Perry, Sr., Boone; Mrs. O. F. Smith, Scotland Neck; Mrs. William C. Terry, Hamlet; Mrs. Robert F. Warren, Prospect Hill; Mrs. Paul F. Whitaker, Kinston; Mrs. B. D. Moore, Mount Holly; and Mrs. Calvin S. Hicks, Durham.

Mrs. Ledyard DeCamp, Charlotte, American Medical Education Foundation chairman, reported that additions to this fund make the total for the current year \$1061.25.

Mrs. W. C. Piver, Jr., Washington, chairman of the Jane Todd Crawford Memorial Fund, announced a revised total of \$136.00 for the year.

Mrs. Charles M. Norfleet, Jr., Winston-Salem, Press and Publicity chairman, asked the members to report to her if the publicity concerning the state meetings is being used by the state newspapers so that time and money will not be wasted if this information is being received too late.

Under old business the following recommendation made by the Executive Committee was passed: that the Auxiliary follow the wishes of Mrs. Lee and use the \$75.00 now known as the Thomas Lee Fund for the purchase of books in the field of cancer for the library of Memorial Hospital in Chapel Hill, and that these books be selected by Dr. Berryhill.

The following Nominating Committee was elected: Mrs. Ben Royal, District Two, Mrs. A. H. Powell, District Six; Mrs. L. E. Sawyer, District One; Mrs. Charles Norfleet, Jr., District Eight; Mrs. Joe Van Hoy, District Seven.

Under new business the following recommendation of the Executive Committee was read by the secretary: Inasmuch as the memory of Jane Todd Crawford has been perpetuated in the restoration of the home of Dr. McDowell, where a room has been furnished in her name, that the Jane Todd Crawford Memorial Fund be dissolved and the money turned over to the American Medical Education Foundation to be used in southern medical schools. This recommendation was passed and is to be made to the Auxiliary to the Southern Medical Association by our state councilor at its fall meeting.

Mrs. J. M. Hitch, Raleigh, treasurer, presented the following recommendation of the Finance Committee: In January, 1955, the Finance Committee discussed the advisability of converting the F and J Series of United States Defense Bonds, held in safe-keeping for the George M. Cooper Endowment Fund, the McCain Endowment Fund, and the Student Loan Fund. Series F and J Bonds mature in 12 years, with interest being paid at that time, while Series K Bonds pay interest semi-annually. The chairman pointed out that conversion of these bonds into Series K bonds would provide enough income yearly to make these endowment funds self-supporting.

The Advisory Board of the Medical Society of the State of North Carolina was asked for its opinion, and Dr. Roscoe McMillan, chairman, Dr. Milton Clark, and Dr. Annie Louise Wilkerson have given the Finance Committee of the Auxiliary their written approval of such a move. The conversion of these bonds has also been discussed with Mr. Arthur Morris and Mr. H. K. McClaughon of the Wachovia Bank and Trust Company in Raleigh, where the bonds are held in a safety deposit box; and they looked upon it favorably.

The Martin L. Stevens Endowment Fund is invested in Series G Bonds, which are yielding \$252.00 interest annually; this amount is sufficient to support the Stevens Bed, since the actual cost of maintaining a patient is only \$240.00. The Finance Committee has no desire to make any changes here.

The Committee would, however, like to place the other endowment funds on the same basis. This change can be accomplished in the following manner:

George M. Cooper Endowment Fund: Redeem F and J bonds at \$7,043.00 (cost \$6,480.00, with an appreciation of \$563.00) and purchase \$8,000.00 Series K Bonds (taking \$957.00 from the savings account). There are already \$1,500.00 in Series K Bonds, which would make a total of \$9,500.00, yielding yearly interest of \$262.20 for the upkeep of the Cooper Bed at Eastern North Carolina Sanatorium, Wilson.

McCain Endowment Fund: Redeem Series F and J Bonds at \$9,268.43 (cost \$7,776.00, with an appreciation of \$1,492.43) and purchase \$9,000.00 Series K Bonds (putting \$268.43 into the savings account). There are already \$2,500.00 in Series K Bonds, which would make a total of \$11,500.00, yielding yearly interest of \$317.40 for the upkeep of the McCain Bed at the North Carolina Sanatorium, McCain.

Student Loan Fund: Redeem Series F Bonds at \$929.00 (cost \$720.00, with an appreciation of \$209.00) and purchase \$1,000.00 Series K Bonds (taking \$71.00 from the savings account). These bonds would yield yearly interest of \$27.60.

Paul Allison Yoder Endowment Fund: This fund is just being started, but as the funds are built up in the savings account, it is recommended that Series K Bonds be purchased, this interest being used to help defray maintenance costs of a patient in the Yoder Bed at Gravelly Sanatorium, Memorial Hospital, Chapel Hill.

Mrs. Hitch moved that her report on conversion of the bonds be accepted. It was seconded and passed. At the suggestion of Mrs. Billings, a vote of thanks was given Mrs. Hitch for her work.

The meeting was adjourned and refreshments were served.

Mrs. Joe M. Van Hoy
Recording Secretary

MEETING OF THE HOUSE OF DELEGATES

Tuesday, May 3, 1955

Minutes

The annual meeting of the House of Delegates of the Auxiliary to the Medical Society of the State of North Carolina convened at 9:00 a.m. in the Pine Room of the Carolina Hotel, with Mrs. Powell G. Fox, Raleigh, president, presiding.

The invocation was given by Mrs. D. M. Royal, Salemburg. The roll call of delegates was read by Mrs. Joe Van Hoy, Charlotte, recording secretary. It was moved, seconded, and passed that the reading of the minutes of the previous meeting be omitted since they had been published previously.

Mrs. Fox introduced the speaker of the morning, Mrs. Clark Bailey, Harlan, Kentucky, regional vice president of the Woman's Auxiliary to the American Medical Association. Mrs. Fox reviewed the day's activities for Auxiliary members, including the luncheon for officers and county presidents at the Country Club, followed by a fashion show and tea for the membership. Mrs. R. D. Croom, Jr.,

Maxton, president-elect, called attention to the Woman's Auxiliary Breakfast scheduled for Wednesday morning.

Mrs. G. M. Billings, Morganton, first vice president, took the chair while Mrs. Fox presented her report, which was accepted. The report of the president-elect was given by Mrs. Croom. Reports of the recording and corresponding secretaries were omitted. Mrs. Joseph M. Hitch, Raleigh, treasurer, read her report which was accepted.

Mrs. Billings introduced the district councilors, who in turn presented their county presidents. Mrs. William P. Richardson, Chapel Hill, second vice president and chairman of activities, announced that Mrs. I. W. Fleming, Rocky Mount, had agreed to serve as honorary chairman of the Cooper Endowment Fund until it reached its goal of \$10,000.00.

Reports of standing and special committees were not read, since mimeographed copies had already been sent to all board members and delegates, and would be published in the September issue of the *NORTH CAROLINA MEDICAL JOURNAL*. Reports of Doctors' Day (Mrs. Ben Royal, Morehead City, chairman) and Memorials, (Mrs. Charles T. Grier, Carthage, chairman) were read. These reports are given in detail in the minutes of the Executive Board meeting of May 2.

Mrs. C. T. Wilkinson of Wake Forest, North Carolina Women's Council representative, announced that henceforth the council is to be known as the North Carolina Council of Women's Organizations. She asked the membership to take note of the schedule of women's activities, which was edited by her, and stated that copies may be obtained for 25 cents.

The recommendation of the Executive Committee concerning the Thomas Leslie Lee Fund and the Jane Todd Crawford Memorial Fund were read and passed. These reports are included in the minutes of the Executive Board meeting of May 2.

The tentative budget for 1955-1956 was read by the treasurer, Mrs. J. M. Hitch, and accepted.

Mrs. R. L. Garrard, Greensboro, chairman of the Revisions Committee, reported on the changes in the by-laws. After some discussion it was moved, seconded, and passed that the report, with some changes, be accepted. (A copy of the proposed changes is attached to the minutes in the files of the recording secretary, where they may be reviewed at any time.)

Mrs. Hitch read the report of the Finance Committee on suggested conversion of the bonds which had previously been presented to the Executive Board. Her report was accepted.

The names of the Nominating Committee as selected by the Executive Board were read by Mrs. Joe Van Hoy, Charlotte, recording secretary.

Mrs. Fox announced that the Auxiliary is entitled to 19 delegates at the meeting of the Auxiliary to the American Medical Association at Atlantic City June 6-10. Mrs. McMillan moved that those who planned to attend and would act as delegates forward their names to Mrs. Croom in order for her to issue the necessary credential cards. This motion was seconded and passed. Mrs. Billings reminded the membership that those serving as official delegates are entitled to certain special activities at the convention.

The following recommendation from the Executive Committee was read and accepted: That the Auxiliary take action on a letter from Mr. James T. Barnes, executive secretary of the Medical Society of the State of North Carolina, suggesting that it would be "a fine public relations move if the

Auxiliary could make a project in each of the auxiliaries to take one daily press organ in their county and assign to a committee the definite responsibility of clipping those articles in which either a physician or a member of a physician's family participates, not from the standpoint of medical meetings, similar organizations or medical movements, but purely civic and eleemosynary activities, such as participation in politics, membership on boards and councils." The report was accepted and the letter was turned over to Mrs. Croom.

The meeting was adjourned at 10:45 a.m.

Mrs. Joe M. Van Hoy
Recording Secretary

GENERAL SESSION

Tuesday, May 3, 1955

Minutes

The general meeting of the Auxiliary to the Medical Society of the State of North Carolina convened on Tuesday, May 3, 1955, at 11:00 a.m. in the Pine Room of the Carolina Hotel, Pinehurst, with Mrs. Powell G. Fox, president, presiding. After the meeting was called to order, the invocation was given by Mrs. P. P. McCain, Red Springs.

The pledge of loyalty was repeated in unison. It was moved that the reading of the minutes and the roll call by the recording secretary, Mrs. Joe Van Hoy, Charlotte, be omitted. This motion was seconded and passed.

Dr. Zack D. Owens, Elizabeth City, president of the Medical Society of the State of North Carolina, was introduced and brought greetings from the Society. He spoke briefly on the Auxiliary motto "Service to Others," citing the various contributions of the Auxiliary and commending the members for their activities.

Announcements were made of the balance of the day's activities. A telegram of greeting from Mrs. John T. Saunders, past president, was read.

Greetings from the Sixth District, in charge of arrangements for the meeting, were brought by Mrs. C. E. Gardner, Durham, councilor. She expressed appreciation to the local members who assisted in making the plans, particularly Mrs. Ralph Garrison, Mrs. William Hollister, Mrs. George Heinitsh, Mrs. Michael Pishko, Mrs. Joseph Hiatt, and Mrs. W. M. Peck. The response was made by Mrs. L. J. Parsons, Lumberton.

Past presidents were recognized by Mrs. P. P. McCain, Red Springs. Eight former presidents were present.

Mrs. Fox introduced Mrs. Clark Bailey of Harlan, Kentucky, regional vice president of the Woman's Auxiliary to the American Medical Association, who presented the address of the morning. She expressed regret that the national president could not be present. She stressed the responsibilities of doctors' wives in the community, and mentioned the part of the Auxiliary in helping the doctors' families. Although the Auxiliary had 67,000 members last year, she stated that the objective of the National Auxiliary is to have every doctor's wife a member. Mrs. Bailey stressed the appropriate theme for the present year, "Leadership in Community Health." Auxiliary members were warned to be careful in expressing opinions for the public. She called attention to the fact that the Auxiliary last year contributed \$52,000.00 to the American Medical Education Foundation, and

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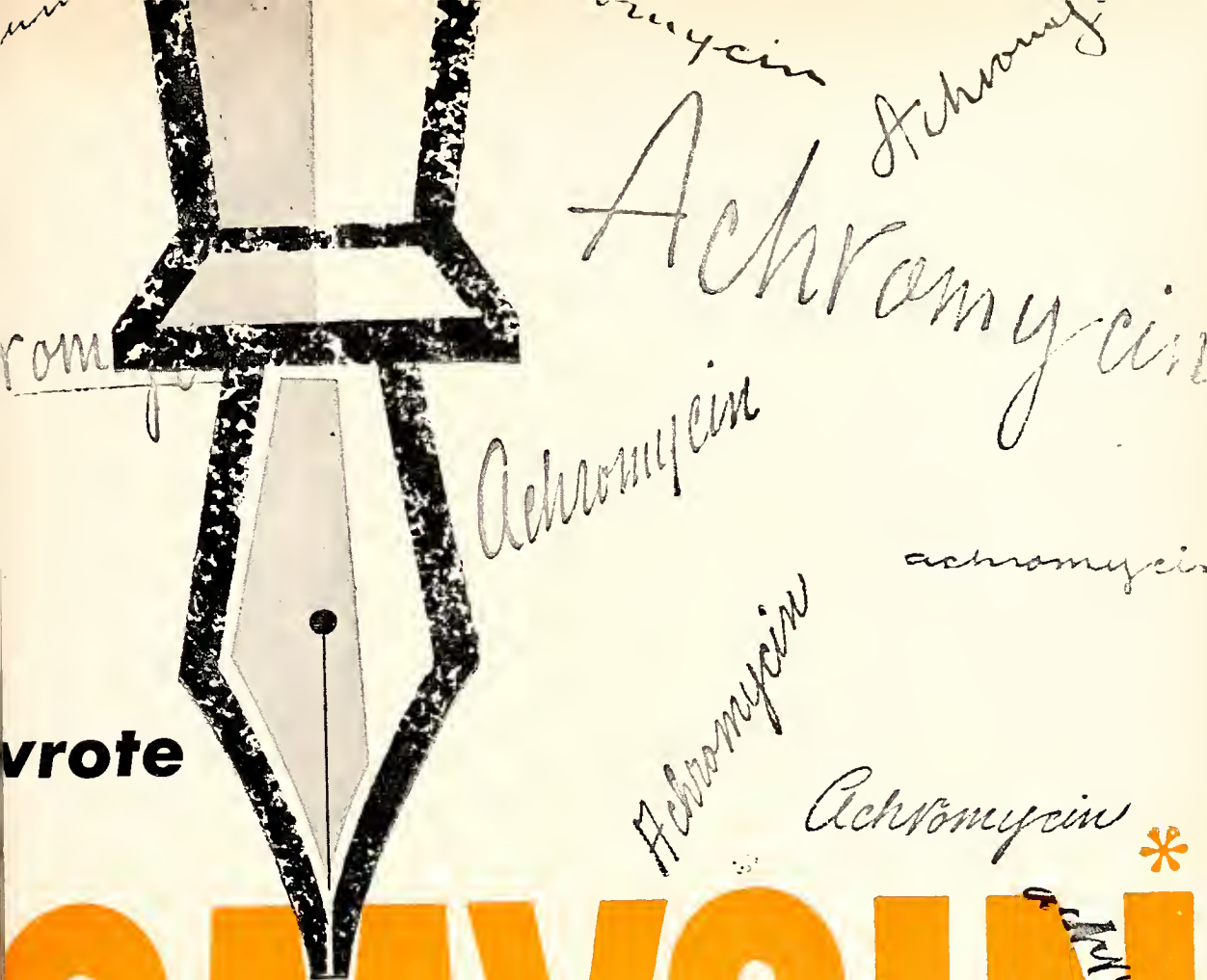
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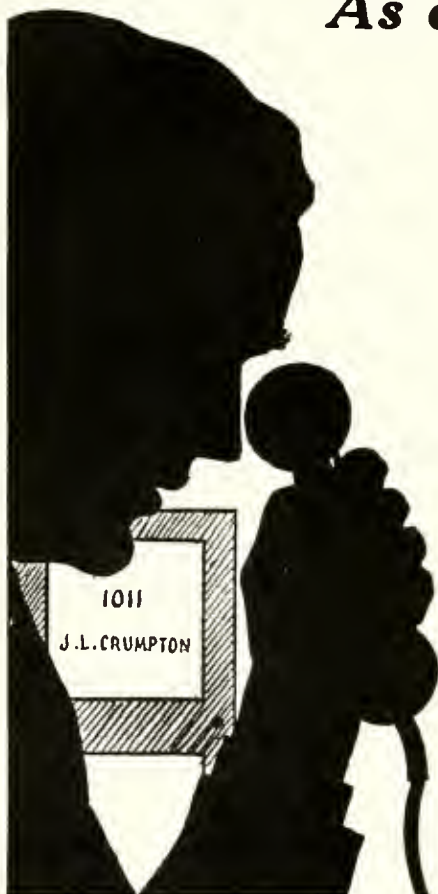
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5,000.00	15,000.00	75.00 weekly	131.00	66.00
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that 40,000 new subscriptions to *Today's Health* had been added. She stressed the value of this publication for both the information it contains and its function as a means of promoting public relations. Mrs. Bailey pointed out that doctors have learned that they must show an active interest in legislative proceedings and that the Auxiliary must share this interest. She concluded by stating that the "Auxiliary is great only as the individual member is great."

Mrs. D. M. Royal, Awards chairman, announced the following awards for 1954-1955:

Mrs. G. M. Billings Award for the first county with 100 per cent dues paid—to Lee County (Mrs. Waylon Blue, Sanford, president).

Dr. Thomas Leslie Lee Memorial Award for the largest contribution to the Cooper Bed Fund—to Durham-Orange Auxiliary (Mrs. Kempton Jones, president).

Mrs. B. Watson Roberts Award for the largest contribution to the Student Loan Fund—to Gaston County (Mrs. P. L. Freeman, Bessemer City, president).

Mrs. Frederick R. Taylor Award for doing the most to advance nurse recruitment—to Forsyth, Stokes Auxiliary (Mrs. Winston Roberts, Winston-Salem, president).

Mrs. Karl Pace Award for obtaining the largest number of subscriptions to *Today's Health*—to Mecklenburg County (Mrs. G. Aubrey Hawes, Charlotte, president).

Mrs. Powell G. Fox Award for the largest contribution to the American Medical Education Foundation—to Gaston County (Mrs. P. L. Freeman, Bessemer City, president).

Dr. Rachel Davis Achievement Award:

GROUP 1. to Fourth District (Mrs. Harold E. Wolfe, Goldsboro, counselor); GROUP 2. to Ninth District (Mrs. C. M. Kendrick, Lenoir, counselor).

In recognition of her long years of service as treasurer of the Auxiliary to the Medical Society of the State of North Carolina, Mrs. Fox presented a jewelled pin to Mrs. E. C. Judd, Raleigh, *in absentia*, with these remarks: "It is my happy privilege to present to you a small memento, designed to keep our memory ever green in your heart and to remind you of our gratitude for your many years as 'watchdog of our treasury' and for your interest and encouragement in Auxiliary work. Wear it, cherish it, and think often of our sincere appreciation of your years of selfless service." Mrs. Fox stated that she would present the gift to Mrs. Judd personally.

The report of the Nominating Committee was made by Mrs. Roscoe McMillan, Red Springs, as follows: for the office of president-elect, Mrs. Harvey C. May, Charlotte, and for the office of recording secretary, Mrs. R. L. Garrard, Greensboro. A letter of endorsement for Mrs. May from the Mecklenburg Auxiliary was read. The report of the Nominating Committee was accepted.

Mrs. P. P. McCain installed the new officers and Mrs. Fox presented the president's gavel to Mrs. Croom with appropriate remarks and best wishes. Mrs. Croom expressed her sympathy to Mrs. Clinton in the loss of her husband. She thanked the Auxiliary for the honor of serving as president and asked for their interest, cooperation and prayers during the coming year.

The recording secretary was instructed to send telegrams to Mrs. Clinton and Mrs. Judd expressing the appreciation of the Auxiliary for their work.

The meeting was adjourned.

Mrs. Joe Van Hoy
Recording Secretary

Report of the President

As President of the Auxiliary to the Medical Society of the State of North Carolina, I wish to submit the following report:

With the beginning of my tenure of office in May plans were laid for the year's work. The completion of committee chairmen appointments, collecting data and compiling the Yearbook and arranging for the Executive Board Meeting in September took the better part of the summer.

The groundwork for our efforts during the year was laid September 8, 1954 when the Fall Executive Board Meeting was held at Morehead Planetarium, in Chapel Hill. The discomfort of unseasonably hot weather seemed not to deter the spirit of things. The meeting was well attended and we believe it was a source of inspiration as well as instruction. Dr. Paul Whitaker spoke on "The Health Picture in North Carolina Today." We had greetings from Mr. James Barnes, Executive Secretary of the North Carolina Medical Society. Dr. George Paschal, First Vice President of the North Carolina Medical Society, was their representative and brought us an encouraging message.

In late September I had the pleasure of appearing before the Executive Council of the Medical Society and giving a short resume of the accomplishments to date and the projects to be undertaken this year.

"Leadership in Community Health" is our National Auxiliary work theme for the year; "Service to Others" is ours. These were reflected in the goals we worked toward. Even though not fully attained creditable progress was made. Among these were:

1. Increased Membership
2. Nurse Recruitment
3. *Today's Health*
4. Public Relations
5. Civil Defense
6. Mental Health
7. American Medical Education Foundation
8. Rural Health

The membership picture is encouraging in spite of the fact that I must report the loss of two previously considered organized, counties; Greene in the Fourth District, and Randolph in the Eighth District. However, I am happy to say, through the re-organization on a county level, we now have two new auxiliaries in the First District. This brings our total of 100% organized districts to two. We now have 50 active county auxiliaries with a total membership of over 1916, with 28 members-at-large to date.

Cooperation in Nurse Recruitment was strengthened markedly. Thirty-eight counties participated. Many auxiliaries made worthwhile contributions to the recruitment campaign in high schools by assisting during "Career Day," giving teas for both white and colored students in their respective high schools and conducting tours of county hospitals. Three Future Nurses Clubs were organized, 8 scholarships or loan funds have been established. In one district over \$500 has been raised for a scholarship. Students have been sponsored in both regular and practical nurse training.

Today's Health was taken as a special project in some auxiliaries, a definite interest in most of the others. Thirty-six counties participated; several won recognition for selling more than 100% of their quota. The total number sold to date is 769.

Public Relations have been enhanced by the cooperation of auxiliary members, both individually and collectively, with agencies serving the community. Many served through their church, P.T.A.,

Junior League, and American Association of University Women. Each district reports working with health organizations and civic enterprises. One auxiliary chauffeured aged people to "Golden Age" meetings, another worked with the Welcome Wagon distributing pertinent health information to the newcomers in their area.

Continued interest in Civil Defense was quite apparent. Through your State Chairman each County President was put on the State Civil Defense mailing list. Eighteen of the 24 auxiliaries reporting took part, both individually and collectively in various phases of Civil Defense. Six organizations had a program on the subject given by well qualified persons.

The Auxiliary has received recognition in the Civil Defense Bulletin for Women, for its interest and participation.

It is encouraging to record increased interest and activity in Mental Health. Twenty-six counties reported, 12 had programs on different phases of Mental Health. Some assisted in plans to help obtain Mental Health Clinics; where clinics were established they assisted in many ways. Radio programs were sponsored, T. V. was used. Community lectures on Mental Health were promoted.

The Auxiliary was well represented at the State Rural Health Conference last Fall and is taking active interest in the two regional conferences for eastern and western sections in March. More Rural Health Chairmen were appointed this year and they report a variety of activities—acting as hostesses for local Rural Health Meetings, providing skin tests (T. B.) for first grade students in rural areas, furnishing monthly transportation to Orthopedic Clinic, helping doctors gather information for medical forum for rural and urban people.

Thirty-one auxiliaries have donated to the American Medical Education Foundation, ten of those in honor of Doctors' Day. Three plan "benefits"; bridge, informal dance, and a Magic Show, all profits to go to the Foundation. Amount of gifts to date is \$1061.25.

One hundred and one (101) Bulletins have been sold; one county reports 100% subscribed.

Our local projects, the sanatoria Bed Endowment Funds, still are short of the hoped for completed three. The Cooper Endowment Fund has not, at this date, attained its goal of \$10,000. We have hopes that it will before the fiscal year closes. The new project, our Yoder Endowment Fund for the establishment of a bed in Gravelly Sanatorium, is now something more than a gleam in our eye. To date donations total \$502.60.

Our guests in the Sanatoria Beds are: Cooper, Miss Margie Lee Renfrow of Kenly who entered January 1955, after Mrs. Crisp had been discharged December 1954; McCain, Dr. Geddie Monroe of Fayetteville; Stevens, Mrs. Lena Ann Cloninger, graduate nurse of Charlotte, who entered January 1955 upon Dr. Crandell's release in December 1954. A year around remembrance schedule was set up by the three chairmen in which most of the organization took part.

Our Student Loan Fund we hope to reactivate by deleting the restriction to sons and daughters of doctors. The necessary change in the By-Laws will be presented to the Executive Board for approval and voted on by the House of Delegates in May.

Our mouthpiece, the Auxiliary News, under the expert editorial thumb of Mrs. George Paschal, Jr. has offered us a wonderful medium for the exchange of news, views and ideas. Each edition was put together with sharp evaluation as to newsworthiness and real "know-how." Your President is most grateful for the invaluable opportunity it has offered her to keep informed, as well as to inform.

However, were it not for the Hospital Saving Association of Chapel Hill, which shoulders the larger financial burden as well as the publishing burden of our news sheet, we could have none of the proven benefits of such an enterprise. May I express to them our grateful appreciation of their untiring service and cooperation. May I remind you too that we could have a 100% coverage of the membership if each county would only follow the suggestion of the editor and send one list of dropped members and one list of new members to her. The mailing list then could be kept current.

Traveling was part of my responsibility and a very large part of my pleasure. I was most fortunate to be able to accept all but 2 of the invitations extended to me, those of the Seventh and Fifth Districts. In all, I attended 5 district meetings, and 6 county meetings. Burke County Auxiliary invited all the organizations in the Ninth District to their meeting, so I had the distinct pleasure of meeting many of the ladies I had the privilege of being with during the Ninth District Meeting in Lexington. If the pleasant association of all these contacts were but half the inspiration and satisfaction to those whom I traveled among as they were to me, then I consider the time and effort expended well worth while. I attended the Rural Health Conference in September and the Public Relations Conference held in February; there was no notification sent to me of the North Carolina Health Council meeting so the Auxiliary was not represented. I have however contributed material to two issues of their Newsletter. The Auxiliary was represented at the Southeastern Conference on Family Living held in Asheville in October (by Mrs. J. D. Stratton) and at the various meetings of the North Carolina Woman's Council (by Mrs. C. T. Wilkinson.) We were also represented at the Farm Bureau Women's Public Affairs Conference and Nurses Association Meeting in Asheville.

The year is about at an end and my deep appreciation goes to each member for her fine work. Goals were attained and work accomplished by your willing cooperation, enterprise and determination. You ARE the Auxiliary and we are grateful to you.

Hearing of work being done is encouraging; seeing it and learning to know those whose efforts reflect the purpose of this fine organization and make possible its success is the happy reward of service which I feel honored to have been able to give. You and I are sculptors, in a sense. Let us continue to create something worthwhile and enjoy the privilege of doing so, day by day, and year by year.

I could not end this report without expressing my sincere appreciation and deep gratitude to the Medical Society and every single person in the executive office for so markedly lightening my burden.

They have been bombarded by me constantly with this or that problem and never seemed to consider it too trivial to listen to, and to assist in solving. This has all involved time and expense.

May I thank you and them most sincerely.

Mrs. Powell G. Fox

Report of the President-Elect

The Auxiliary to the Medical Society of the State of North Carolina has sustained a loss in the resignation of our president-elect, Mrs. Roland S. Clinton of Gastonia. She found it necessary to relinquish her office due to the serious illness and subsequent death of her husband. Our profound sympathy goes to her.

The Executive Committee has been unable so far to find a successor.

Mrs. Powell G. Fox
President

Report of the First Vice President and Chairman of Organization

The year of 1954-1955 has been a very good year for the Auxiliary to the Medical Society of the State of North Carolina. Perhaps all our plans were not carried through, but all in all it has been an outstanding year in the history of the Auxiliary.

Our 10 councilors and county presidents have done excellent work. We are gaining a little each year toward our 100 per cent goal. That would mean 72 organized counties; we now have 70. We have a gain in membership which seems to more than compensate for any loss sustained—it now stands at 1849, an increase of 21 over the same time last year.

We have lost two previously considered organized auxiliaries, but are happy to report that the reorganization of the First District has brought us two new auxiliaries. There are now three where only one was before, making a total of 50 active county auxiliaries.

First District was organized on a district level until last year. They now have three county-level groups which makes the district 100 per cent organized. The total membership was increased from 27 to 43. This new set-up is working fine.

Second District has six medical societies and six auxiliaries. Due to the widely separated areas three counties are not organized, but all the doctors are honorary members of the Society. Since they are organized as far as they can be this should place them in the 100 per cent groups. Carteret still maintains 100 per cent membership.

Third District has four auxiliaries. One more will make it 100 per cent. It has two members-at-large.

Fourth District has six auxiliaries. They need one more to gain 100 per cent. Warren was organized in May, 1954, and has nine out of ten eligible members. Greene has disbanded, having only three eligible members.

Fifth District reports a membership of 186 out of a possible 204, an increase of 13. They have eight organized auxiliaries, lacking just one for that 100 per cent category.

Sixth District has seven medical societies and five auxiliaries. It was in charge of the State Meeting in Pinehurst this year. This district has the second highest membership.

Seventh District has four auxiliaries out of a possible ten. We hope to have more soon.

Eighth District still holds the record for the largest membership, even though it has lost one county auxiliary, Randolph, which we regret to report removes it from its 100 per cent rating. The two branches of the Guilford County Auxiliary are working out fine.

Ninth District has five auxiliaries out of a possible seven. Burke is 100 per cent in membership. Congratulations!

Tenth District has three organized counties, owing to its widespread town, mountains, and few doctors. We are hoping for more soon.

All the districts held meetings this year. These were interesting and enjoyable, with old friends and new seeing each other. It all adds up to good public relations and helps in various projects.

May I congratulate the councilors and county presidents for the very fine work they have done this year. It has been a pleasure to work with you, and I would like to thank each of you for your co-operation.

Mrs. G. M. Billings

Report of the Second Vice President and Chairman of Activities

Five major activities of the Auxiliary to the Medical Society of the State of North Carolina have been under the capable leadership of the following chairmen: Mrs. Roscoe D. McMillan, Student Loan Fund; Mrs. William G. Spencer, Jr., Cooper Bed, with Mrs. M. I. Fleming as honorary chairman; Mrs. R. A. Matheson, McCain Bed; Mrs. William Ray Griffin, Stevens Bed; and Mrs. W. L. Kirby, Yoder Bed.

The year round remembrance schedule has been used by the three chairmen of beds now occupied by guests. This schedule will be revised to include the guest in the new Yoder Bed after the annual meeting when funds are available to start its operation. The guests in the three present beds have been most grateful for the many kindnesses shown them by individual members and by the various auxiliaries.

Mrs. William Spencer, Jr., reported the discharge in good condition, of Mrs. Evelyn Webb Crisp, a registered nurse, who was our guest from June, 1954, to December 22, 1954. Our guest since January 18, 1955, has been Miss Margie Lee Renfrow of Kenly. She was admitted to the hospital in September, 1954, with an early case of tuberculosis, and she is expected to be hospitalized for 8 to 10 more months. Mrs. Spencer has notified all counties of the change in guests and has emphasized the need for generous contributions to complete the Cooper Bed Endowment Fund. She has been assisted in this work by Mrs. M. I. Fleming, who has done so much to build and very nearly complete the Cooper Endowment Fund. Mrs. Fleming has graciously agreed to serve as honorary chairman until the \$10,000 goal is reached. Contributions for the year, through February 18, amount to \$664.50.

Mrs. R. A. Matheson reports that our guest in the McCain Bed is Dr. Geddie Monroe of Fayetteville, who has been at McCain since early 1954. Mrs. Matheson has written many reminders to auxiliaries, and reports excellent cooperation with the remembrance plan. She has personally visited the patient at least once a month, always with some token of thoughtfulness.

Mrs. W. R. Griffin tells us that Dr. Crandall, Stevens Bed guest, was released in December, 1954, and Mrs. Lena Ann Cloninger, a graduate nurse at Mercy Hospital, Charlotte, became our guest in January, 1955. Dr. Crandall was most appreciative of the many courtesies shown him by all auxiliaries; one outstanding event was the shower which Mrs. Griffin and the Buncombe County Auxiliary had for him in November, in addition to their usual thoughtful attentions. Mrs. Cloninger says she feels very privileged to be the new guest.

Since it is not possible to have a guest in the newly established Yoder Bed until operating expense funds are set up at the annual meeting, Mrs. W. L. Kirby, chairman, has been able to concentrate her efforts on establishing the endowment fund and making the membership aware of the new Yoder Bed. She has been busy sending letters to all auxiliaries enlisting your help in raising the needed \$10,000 for this endowment fund. On her behalf, let me urge you to keep the new Yoder Bed Endowment Fund foremost in your minds and hearts as you plan your work for the coming year. It is hoped that the Cooper Bed Endowment will be completed by the time of the annual meeting, thus leaving only one bed endowment fund on which to concentrate. To date, February 18, there is \$440.60 in the Yoder Bed Endowment Fund.

Mrs. Roscoe McMillan, as chairman of the Stu-

dent Loan Fund, has set the wheels in motion to get this fund into active use. In the past the loan has been restricted to sons and daughters of doctors; there have been no requests in the past few years. At the fall meeting of the Executive Board, Mrs. McMillan recommended the following addition to the By-Laws: That a new section be written to follow immediately Section 1. "If no request is made by the son or daughter of a doctor, it may be used by anyone who can fulfill the requirements." This recommendation was approved by the Board and will be presented for a final vote at the annual May meeting. It is the hope of Mrs. McMillan and the Board that this fund will be put into active use at an early date. Mrs. McMillan sent all county presidents a complete outline, including the history, present status, procedure to follow in getting a loan, and other pertinent information. Contributions this year, as of February 18, total \$84.00.

We are all grateful to these chairmen who have given so much to these worth while projects, and appreciate their untiring efforts. They in turn are grateful to you for your help and will look forward to your continued cooperation in the coming year.

Mrs. William P. Richardson

Report of the Recording Secretary

A complete record for the year 1954-1955 of all transactions of the Auxiliary to the Medical Society of the State of North Carolina has been kept and placed on file, and a copy sent to the editor of the *Auxiliary News* for publication. Also all correspondence requested by the president has been written.

Mrs. Joe M. Van Hoy

Report of the Corresponding Secretary

All general correspondence, official notices, and mimeographed instructions, as outlined by our president, Mrs. P. G. Fox, have been sent out at intervals during the current year to the county auxiliaries.

Mrs. Thomas Umphlet

Report of the Treasurer

The report of the treasurer's records for the year 1954-1955 is submitted herewith, receipts and disbursements having been recorded and transactions made according to the By-Laws.

The Cooper Endowment Fund was completed during the year 1954-1955. The last "F" and "J" Series U. S. Savings Bonds were redeemed in July, 1955, in the amount of \$3,875.00, and in August, 1955, \$4,000.00 Series "K" Bonds were purchased. Since the audit was made as of June 30, 1955, it does not reflect this transaction. As of August 31, 1955, therefore, the Cooper Endowment Fund had total assets of \$10,106.08, composed of \$10,000.00 Series "K" U. S. Savings Bonds and \$106.08 in its savings account.

My sincere appreciation goes to my predecessor, Mrs. E. C. Judd, for having turned over very complete and accurate records to me in July, 1954, and every effort has been made by your present treasurer to maintain these records in an efficient manner.

To Mrs. Powell G. Fox, to the Executive Board, and especially to each county treasurer, my gratitude is extended for their wholehearted cooperation. It has made my first year in office a pleasure.

The auditor's report covers in detail the transactions for the past year and is appended to this report.

Mrs. J. M. Hitch

AUDITOR'S REPORT

Mrs. J. M. Hitch, Treasurer
The Auxiliary to the Medical Society
of the State of North Carolina
Raleigh, North Carolina

We have made an examination of the recorded cash receipts and disbursements of the Auxiliary to the Medical Society of the State of North Carolina for the year ended June 30, 1955.

A detailed examination was made of all recorded cash transactions for the period covered and all recorded receipts were found to have been promptly deposited. Disbursements were evidenced by properly executed cancelled checks which were supported by invoices and other supporting data. The cash balances in the various funds were reconciled with the amounts reported directly to us by the depositories. We inspected the government bonds held in safekeeping at June 30, 1955.

In our opinion, the accompanying statements present fairly the results of the Auxiliary's cash transactions for the year.

WILLIAMS, URQUHART & FICKLIN
Certified Public Accountants
Raleigh, N. C.

(Exhibits A and B appear on the following pages.)

REPORT OF THE FINANCE COMMITTEE 1955-56 BUDGET

The Finance Committee of The Auxiliary to the Medical Society of the State of North Carolina submits the following budget for 1955-56, based on collecting dues of \$2.00 from 1,850 members:

Mrs. R. D. Croom, Jr., President Elect
Mrs. G. M. Billings, First Vice President
Mrs. J. M. Hitch, Treasurer

Estimated Receipts

General Fund Balance 6-30-55		\$1,225.33
National Dues	\$1,850.00	
State Dues—(¾ of \$1.00)	1,387.50	3,237.50
Total General Fund		\$ 4,462.83

Sanatoria Fund Balance 6-30-55		\$1,126.28
State Dues—(¾ of \$1.00)		462.50

Interest on Bonds

Yoder Endowment Fund	\$ 27.60	
McCain Endowment Fund	289.80	
Cooper Endowment Fund	220.80	
Stevens Endowment Fund	252.60	790.80

U. S. Savings Bonds redeemed

Cooper Endowment Fund	\$3,875.00	
McCain Endowment Fund	1,760.93	
Stevens Endowment Fund	325.00	5,960.93

Total Sanatoria Fund **8,340.51**

Total Estimated Receipts..... **\$12,803.34**

EXHIBIT A — BALANCE SHEET

June 30, 1955

Cash in Banks—EXHIBIT "B"													
ASSETS				Maturity		Total							
Issued	Series	Value	Date	General Expense Fund	Sanatoria Fund		Martin L. Stevens Endowment Fund	McCain Endowment Fund	George M. Cooper Endowment Fund	Paul Yoder Endowment Fund	Student Loan Fund		
Investments (at cost):													
U. S. Savings Bonds	9/1/43	F	\$ 325.00	9/1/55		240.50							
U. S. Savings Bonds	4/1/45	G	1,000.00	4/1/57		1,000.00							
U. S. Savings Bonds	6/1/47	G	1,000.00	6/1/59		1,000.00							
U. S. Savings Bonds	7/1/48	G	2,000.00	7/1/60		2,000.00							
U. S. Savings Bonds	2/1/49	G	2,000.00	2/1/61		2,000.00							
U. S. Savings Bonds	7/1/50	G	2,000.00	7/1/62		2,000.00							
U. S. Savings Bonds	7/1/50	F	2,000.00	7/1/62		1,480.00	1,480.00						
U. S. Savings Bonds	7/1/50	F	3,000.00	7/1/62		2,220.00		2,220.00					
U. S. Savings Bonds	6/1/51	G	1,000.00	6/1/63		1,000.00	1,000.00						
U. S. Savings Bonds	6/1/52	K	1,000.00	6/1/64		1,000.00							
U. S. Savings Bonds	7/1/53	J	2,000.00	7/1/65		1,440.00		1,440.00					
U. S. Savings Bonds	7/30/55	J	225.00	7/30/65		162.00	162.00						
U. S. Savings Bonds	8/1/54	K	1,500.00	8/1/66		1,500.00		1,500.00					
U. S. Savings Bonds	9/1/54	K	2,500.00	9/1/66		2,500.00	2,500.00						
U. S. Savings Bonds	5/1/55	K	1,500.00	5/1/67		1,500.00		1,500.00					
U. S. Savings Bonds	6/1/55	K	3,000.00	6/1/67		3,000.00		3,000.00					
U. S. Savings Bonds	6/1/55	K	7,000.00	6/1/67		7,000.00	7,000.00			1,000.00	1,000.00		
U. S. Savings Bonds	6/1/55	K	1,000.00	6/1/67		1,000.00							
U. S. Savings Bonds	6/1/55	K	1,000.00	6/1/67		1,000.00							
Total Investments						33,042.50							
Total Assets						39,258.98	\$1,225.33	\$1,126.28	\$10,984.68	\$ 1,761.01	\$9,766.08	\$1,026.88	\$3,368.72
Liabilities						None							
Surplus						\$39,258.98	\$1,225.33	\$1,126.28	\$10,984.68	\$11,761.01	\$9,766.08	\$1,026.88	\$3,368.72

STATEMENT OF RECEIPTS AND DISBURSEMENTS FOR THE YEAR
ENDED JUNE 30, 1955 (Continued)

	General Fund	Sanatoria Fund	Martin L. Stevens Endowment Fund	McCain Endowment Fund	George M. Cooper Endowment Fund	Paul Yoder Endowment Fund	Student Loan Fund
Disbursements—(Brought Forward)	\$ 3,258.46	\$ 531.75	\$	\$	\$	\$	\$
Dues to Other Organizations	22.00						
Thomas Leslie Lee Memorial Fund	75.00						
Tax on Savings Account							
U. S. Savings Bonds Purchased—Series "K":							
McCain Endowment Fund	9,500.00						
Cooper Endowment Fund	3,000.00				3,000.00		
Yoder Endowment Fund		1,000.00					
Student Loan Fund	1,000.00						.59
Transfers from Sanatoria Fund:							
Cooper Endowment Fund		70.00					
Yoder Endowment Fund		24.28					
Transfers to Sanatoria Fund							
Transfers to General Fund:							
For Purchase of U. S. Savings Bond			268.56	349.90		500.00	
Thomas Leslie Lee Memorial Fund							71.00
Convention Expense	20.00						75.00
Total Disbursements	\$16,875.46	\$1,626.03	\$268.56	\$349.90	\$3,000.00	\$500.00	\$146.59
Excess/Deficiency of Receipts over Disbursements	254.58	654.93	3.70	3.07	1,894.44*	26.88	18.46 -
Cash Balance—June 30, 1954	970.75	471.35	740.48	615.94	2,000.52		2,350.26
Cash Balance—June 30, 1955—Exhibit "A"	\$ 1,225.33	\$1,126.28	\$744.18	\$619.01	\$ 103.08	\$ 26.88	\$2,368.72

*Deficit

Estimated Disbursements General Expenses

Purchase of U. S. Savings Bonds Series "K".....	\$6,000.00
Printing and Supplies	550.00
Auditing Treasurer's Records	75.00
Bonding of Treasurer for one year	50.00
Safe Deposit Box Rent for one year	5.50
Convention Exhibit	15.00
Miscellaneous	50.00

Dues to National (1,850 members) 1,850.00

Sanatoria Beds 960.00

Officers

President (including Corresponding Secretary)	250.00
President-Elect (\$50.00 to be used if she attends National Board Meeting)	75.00
Chairman of Past Presidents	5.00
First Vice President (see Councilors)	10.00
Second Vice President (see Bed Chairmen and Student Loan Fund chairman)	10.00
Recording Secretary	10.00
Treasurer	150.00

Committee Chairmen and Councilors

American Medical Education Foundation	10.00
Auxiliary News	200.00
Awards	3.00
Bulletin	3.00
Civil Defense	5.00
Councilors (\$10.00 for each of 10 districts) ..	100.00
Councilor to the Southern Medical Ass'n.	3.00
Doctors' Day	3.00
Historian	10.00
Legislation	10.00
Memorials	20.00
Mental Health (\$2.00 membership; \$8.00 for chairman)	10.00
N. C. Family Life Council (\$10.00 dues; \$3.00 for chairman)	13.00
N. C. Health Council Dues	10.00
N. C. Council of Women's Organizations	5.00
Nominations	15.00
Nurse Recruitment	10.00
Press and Publicity	25.00
Program	15.00
Public Relations	15.00
Radio and Movies	5.00
Research	10.00
Revisions	40.00
Rural Health	5.00
Scrapbook	15.00
Student Loan Fund	5.00
Today's Health	10.00
McCain Bed	5.00
Stevens Bed	5.00
Cooper Bed	5.00
Yoder Bed	5.00

Total Estimated Disbursements.....\$10,660.50
Reserve for Contingencies

General Fund	\$ 762.33
Sanatoria Fund	1,380.51

Total Reserve 2,142.84

Total \$12,803.34

Reports of the Councilors

First District

First District reports progress this year as shown by 100 per cent organization on the county level. Instead of one organization embracing the whole district, we have three county-level groups. These are: (1) Chowan-Perquimans, (2) Camden-Currituck-Dare-Pasquotank, (3) Bertie-Gates-Hertford. The unequal distribution is due to the geographic location of the counties and the distribution of the doctors. We have increased our total membership from 27 to 43.

Chowan-Perquimans, with only nine members, contributed 20 dollars to the American Medical Educational Foundation Fund. They sold 16 subscriptions to *Today's Health*, placing one in each doctor's office and one in each high school in the two counties.

Camden-Currituck-Dare-Pasquotank contributed to the bed funds and to the Medical Education Foundation as their major projects.

Bertie-Gates-Hertford sold nine subscriptions to *Today's Health* and sent extra gifts to the Cooper Bed guest.

We had four well-attended District meetings. At these meetings we were the guests of our doctors at a social hour and for dinner, after which we carried on our separate programs.

Each local auxiliary has four meetings of its own, spaced between the District meetings. All groups participated in Doctors' Day celebrations and in so far as possible carried out the total Auxiliary program.

We feel that the main progress this year comes from our having been organized into smaller units for our "work meetings." We are getting much better acquainted with each other and with the program of the Auxiliary. We plan to increase our projects each year and to take at least one major part of the program as our yearly aim.

Mrs. T. P. Brinn

Second District

The Second District has six active auxiliaries, with 116 members—a loss of 12 members and a gain of 6 in the past year. No further organization is possible; this should place us in the 100 per cent group.

Our District meeting was held in New Bern, with Mrs. P. G. Fox and Dr. Rachel Davis as speakers, and Mrs. J. M. Hitch as guest.

Financial report is as follows:

Sanatoria Bed.....	\$ 5.00
Cooper Bed.....	26.00
Yoder Bed.....	25.00
Student Loan Fund.....	5.00
Jane Todd Fund.....	40.00
American Medical Educational Foundation.....	35.00

As a whole, donations have increased; several have not yet donated.

All auxiliaries made an effort to follow the state program suggestions. All counties observed Doctors' Day. It is unique that two counties, Beaufort and Carteret, observed the day in the same manner

—by a personal note to the doctor and a donation in his honor to the American Medical Educational Fund.

All community drives were participated in—that is Red Cross, TB, polio, March of Dimes, and so forth.

Beaufort County did outstanding work this year. Members assisted the Public Health Department in school clinics and public clinics for detection of diabetes, and kidney and venereal diseases. Washington's "Welcome Wagon" system of greeting newcomers to town was operated by an Auxiliary member, and this group placed a physician directory in each packet for distribution. The auxiliary also sponsored a young man and helped him enter medical school. They influenced one entry for nurses' training. They had two representatives at the San Francisco National Convention.

Pitt County had the honor of having the "Physician of the Year", Dr. K. B. Pace. They had a yearbook for the first time.

Carteret still maintains its 100 per cent membership.

Craven had the misfortune of losing one of its members, Mrs. Eugene B. Hardin, of New Bern. Our sympathy.

Lenoir still has its active "Pink Ladies." They plan to furnish the main reception room at the county hospital.

Public Relations have been constantly maintained by the Auxiliaries through their help in clinic and hospital work, and by sale of *Today's Health*. Seventy-one (71) subscriptions were sold, 47 to doctors and dentists, and 7 to schools. Beaufort received a rating of 159 per cent in the National Contest.

This seems to have been a very active year, even though our goal is, as we would have it, just beyond us.

I feel that my incentive has been the tireless cooperation, understanding, and help from our most capable state officers. I am anticipating another enjoyable "next year."

Mrs. W. C. Piver, Jr.

Third District

The Third District has ended its third year since organization with the members feeling that much has been accomplished in recognized projects and retaining their usual spirit of warmth and cooperation.

The entire District has expanded its public relations activities and is more active in church and civic affairs.

All four auxiliaries have had chairmen corresponding to state chairmen, are making plans for Doctors' Day, have participated in all local drives, and have contributed time to hospitals and auxiliaries.

Three auxiliaries contributed to the Cooper Bed Fund; one to the Yoder Bed Fund; three to the Jane Todd Crawford Memorial Fund; three to the American Medical Education Foundation; three participated in caring for guests in the Stevens and Cooper Beds; two for guests in the McCain Bed; three had an Advisory Committee from their component medical society; two followed suggestions given in the state program; three took an active part in nurse recruitment; one assisted in the Medical Society's essay contest; one had a yearbook; three have elected at least the president for 1955-1956 and sent in the names to the president-elect. Seventy-nine subscriptions to *Today's Health* were sold—an increase over last year.

New Hanover-Brunswick-Pender Auxiliary has sponsored a nursing scholarship, considering this

their outstanding achievement of the year. They also assisted at the New Hanover County Medical Symposium; counted receipts from TB Seals; dressed dolls for the Salvation Army; participated as individuals in all community activities, civic drives, and church affairs.

Onslow County Auxiliary members have given freely of their time and efforts in working with their hospital auxiliary; have served on school boards; have bettered their community relations by active participation in civic and church organizations. Through the concentrated efforts of their Public Relations Committee, a greatly needed blood bank was obtained. They claim this as their most outstanding achievement.

Sampson County has again had as its special project an active nurse recruitment program and has given another \$100 nursing scholarship. Members have also been active in civic and church affairs and were hostess to the Third District meeting this year.

Columbus County feels that its most important accomplishment this year has been to establish a nursing scholarship. This \$100 scholarship was given by the 16 members of the Auxiliary to honor their doctor-husbands on Doctors' Day. They have again rolled bandages for the Cancer Clinic in Lumberton, and for the third consecutive year have furnished transportation to patients of Columbus County to the Orthopedic Clinic in Lumberton. All members are active in church, school and civic affairs, and many hold responsible positions and offices.

As Third District counselor, I have kept in contact with my four Auxiliary presidents and several members of my two unorganized counties. Plans are underway to organize one of these counties in the near future. I attended the fall Board meeting in Chapel Hill; planned with the aid of my District secretary, Mrs. W. E. Baldwin, and county presidents, the District meeting in Clinton, February 8, 1955. Mrs. Andrew Chesson, Raleigh, State Civil Defense chairman, spoke at this delightful luncheon meeting. Mrs. P. G. Fox, state president, was an honor guest. I am justly proud that three of my four Auxiliaries have established a nursing scholarship, aside from the outstanding work each county has done in all phases of community activities and in promoting good public relations between the medical profession and the public—realizing that it is the little things we do that make the big things in the end.

Mrs. W. A. Greene

Fourth District

The Fourth District—composed of Edgecombe, Nash, Greene, Halifax, Northampton, Johnston, Wayne, and Wilson Counties—has 143 paid up members, an increase of 13 members.

I have attended three county meetings and one executive meeting, and have kept in contact through telephone and letters. The Davis Cup, our permanent trophy, was awarded to the Edgecombe-Nash Auxiliary for the most outstanding achievements in 1953-54. The award was made at the District meeting in October. It was voted at this meeting that we continue to award the cup each year at the District Meeting to the county doing the most outstanding work. An informative and delightful District meeting was held at the Colonial Manor near Roanoke Rapids on October 28, 1954, with Mrs. P. G. Fox, our state president as speaker, and Mrs. George Paschal, state Auxiliary News chairman as guest. Halifax-Northampton counties

were hostesses and there were 24 members present.

Meeting two to five times a year, three counties followed state program suggestions. Other programs were adapted to the needs of the county, with special emphasis on nurse recruitment, public relations and special Auxiliary projects.

Auxiliaries did fine work in various civic drives, including cancer, Red Cross, United Fund, TB, polio, heart, crippled children, and the diabetic and cancer clinics. They have supported book carts for the hospital, and nurse scholarships. They have also sold 39 *Today's Health* subscriptions.

Four counties contributed to the Cooper Bed Fund; three to the Yoder Bed Fund. Six counties visited and remembered the Cooper Bed patients with gifts and money. Patients in the McCain and Stevens Bed were remembered by Wayne County. Contributions were sent to Jane Todd Crawford Fund (2 counties), Student Loan Fund (2 counties), and to the American Medical Education Foundation (4 counties).

Plans for Doctors' Day by six counties, include dinners, news editorials, red carnations on each doctor's desk, and various gifts and donations to A.M.E. Fund.

Mrs. Allen Lee in Johnston County has led her 12 members in continuing their successful nurse scholarships. They are selecting their third student to enter nurses training in September. Their second nurse will graduate in June. In the past they have given the scholarship as a gift, but beginning this year they will use it as a loan in hopes of helping more student nurses. Members have helped 100 per cent in civic drives and hospital activities.

Wayne County, with 43 members and Mrs. John McLeod as leader, is continuing its successful nurse scholarships. They are selecting their second student to begin nurses' training in September, and are so pleased with the excellent progress of their student now at Rex Hospital. Wayne County has had excellent programs and good attendance at meetings this year.

Wilson's 28 members, with Mrs. E. T. Beddingfield as president, have really worked this year. In November they entertained the wives of the Seaboard Medical Society for three days. They have made approximately 1,000 bandages for the Cancer Society, addressed and mailed over 500 invitations for the Heart Association, and took charge of stage and lobby preparations for Heart Day. They gave the freshman class of nurses a party, took the class on two field trips, and distributed nursing literature for Nurses' Week. They sponsored and maintained book carts for three hospitals, and operated a clearing house at the Salvation Army for Christmas opportunities.

Mrs. I. W. Rose and her 28 members in Edgecombe-Nash again this year maintained a successful week's diabetic clinic under the supervision of the medical society. They had a delightful Christmas party for the medical society.

Mrs. T. J. Taylor and her 23 members in Halifax-Northampton were hostesses for a successful Fourth District meeting this year. They have been active in civic drives, and very interested in their new hospital. They are working on plans for a snack bar there, and have organized the "Gray Ladies."

Green County, having only four eligible members, has disbanded for the time being.

Warren County, our baby auxiliary, organized in May, 1954, has made progress. Mrs. T. J. Holt as president and the nine members are much interested in their new hospital in Warrenton, and have assisted in purchasing and making linen for it.

They lack only one of having 100 per cent membership.

All counties have been active in numerous civic drives and local projects, thus helping to promote better public relations. We are most proud of our nurse scholarships, since by September we will have two graduates and three students in training.

Serving as councilors for the Fourth District the past three years has been a grand experience for me. I am grateful for the opportunity of having worked with these fine auxiliary members. My thanks to each one for their loyalty and cooperation. My appreciation of auxiliary work has certainly deepened, friends have been made, and I wish for my successor, Mrs. E. L. Strickland, of Wilson, the same joy that has been mine.

Mrs. H. E. Wolfe

Fifth District

The membership of the Fifth District has increased from 173 members to 186, out of a possible membership of 204. The number of auxiliaries remains the same—eight organized and one unorganized.

Chatham County continues inactive and has shown no interest in re-organization.

The eight organized counties have increased their donations to the American Medical Educational Foundation and made contributions to the following: Yoder Bed, Jane Todd Crawford Memorial Fund, and the Student Loan Fund. Six auxiliaries participated in caring for the guest in the McCain bed, and one cared for the occupant in the Cooper bed.

These auxiliaries have taken part in the following drives: Red Cross, cancer, United Fund, TB, March of Dimes, and the blood bank.

They have endeavored to promote good public relations between the medical profession, and the public, and have served as officers and committee members in many civic organizations.

Special projects sponsored are as follows:

Robeson sponsored a series of radio transcriptions, recommended by the A.M.A. Health Education Program; gave books and newspaper subscriptions to county hospital; gave student nurses tickets to the North Carolina Symphony and Community Concerts.

Cumberland members helped during the play period at the School for Handicapped Children. They organized Future Nurses Club at the high school, with bi-monthly meetings.

Nurses' Scholarships were sponsored by two auxiliaries: *Robeson*—\$100.00 at the County Hospital; and *Richmond*—\$500.00 at Chapel Hill.

Moore and *Richmond* Counties actively participated in hospital guilds. *Lee* held a hospital tour for high school girls and placed scrapbooks on nursing in the school library. *Richmond* served refreshments at medical staff meetings. Money making projects included a silver tea by *Cumberland*, a fashion show by *Richmond* and *Robeson*, and a magician show by *Lee* (for A.M.E.F.).

All eight auxiliaries plan to observe Doctors' Day.

Fifth District held one fall meeting on December 1, 1954, with Lee County at Sanford, North Carolina. A period of instruction and discussion, followed by a social hour, was greatly enjoyed.

It has been my pleasure to meet with three counties during the year—Hoke in October, Moore in November, and Lee in December. I look forward to meeting with the others in the coming year.

Mrs. Sarah R. Hiatt

Sixth District

There are 306 members of the Auxiliary in the Sixth District. Active organizations are affiliated with the following county societies: Alamance-Caswell, Durham-Orange, Franklin, Person, and Wake. Granville and Vance counties do not have active auxiliaries. Both of these counties have been visited. Each has a very small and scattered membership which has not yet been able to effect an organization.

All county organizations followed the state program of activities, giving special emphasis to the A.M.A. Educational Campaign for Civil Defense and nurse recruitment.

Auxiliary members worked actively in hospital auxiliaries at Duke Hospital of Durham, Watts Hospital of Durham, Memorial Hospital of Chapel Hill, and Rex Hospital of Raleigh. As these organizations also draw many lay workers from their communities, this endeavor has promoted good public relations between the medical profession and the public.

Durham-Orange County contributed \$120.00 to the Cooper Bed, \$50.00 to the Yoder Bed, \$15.00 to the Student Loan Fund, \$5.00 to the Jane Todd Crawford Memorial Fund, and \$50.00 to the American Medical Education Foundation. It promoted the sale and distribution of *Today's Health*. It sold 66 copies and placed 19 in doctors' offices and one in a school library. It expects to have subscriptions for every beauty shop in Durham, Chapel Hill, Hillsboro, and Carrboro by March 1. Cooper, McCain, and Stevens Bed patients have been remembered.

Wake County contributed \$35.00 to the Cooper Bed; \$25.00 to the Yoder Bed; \$5.00 to the Student Loan Fund; \$5.00 to the Jane Todd Crawford Memorial Fund; and \$10.00 to the American Medical Education Foundation. It remembered the patients in the Cooper, McCain, and Stevens Beds. It had a bazaar table each month, members voluntarily bringing items for sale and the proceeds being used to buy dishes for the Rex Nurses Home.

Alamance-Caswell sponsored a benefit bridge, with the proceeds going to their Student Nurse Scholarship Loan Fund. They honored the doctors on Doctors' Day with a "Gay Nineties" dinner party, with entertainment by members. They remembered the patient in the McCain bed. This Auxiliary also acted as hostess for a weight-control class sponsored by the Community Council. They also made dressings once a month for the local office of the American Cancer Society.

Franklin County Auxiliary has worked actively with the guild for Franklin Memorial Hospital. They honored their doctors with a supper on Doctors' Day and presented each one with a red carnation. They gave a tea honoring prospective nurses.

Person County contributed \$2.50 to the Yoder bed, and \$2.50 to the Jane Todd Crawford Memorial Fund. It observed Doctors' Day with an editorial in the local paper, a dinner, and flowers placed in each doctor's office. They planned a Christmas party with doctors, nurses, and hospital staff.

The fall meeting of the Sixth District Auxiliary was a luncheon meeting held on November 2, at the Carolina Inn in Chapel Hill. The speakers were Mrs. Powell G. Fox, president of the State Medical Auxiliary, and Dr. Loren MacKinney, professor of history at the University of North Carolina, who gave an illustrative talk on medical history. Mr. MacKinney had just returned from Europe where he had spent eight months in research on medical history.

Mrs. Beatrice Gardner

Seventh District

Seventh District is steadily growing in numbers and accomplishments. There are 283 active members and 8 members-at-large, leaving a balance of approximately 180 eligible for membership in the district. The latter would receive a warm welcome into the auxiliary should they decide to organize. A very large group attended the Seventh District Medical Meeting on October 26 in Shelby. The ladies of Cleveland County entertained us royally and scheduled many pleasant events for our enjoyment. Such talent and organizational ability would certainly be an asset to your district and state.

As this report is written, our youngest auxiliary, Cabarrus County, is rounding out its thirteenth month of existence with a splendid record of achievement. It has met regularly, has had very good attendance, and made many plans for future development. The auxiliary took material concerning the essay contest to all county school principals, made talks to junior and senior students at the Concord and Kannapolis High Schools, and contributed \$25.00 for a local prize. The group visited the Salisbury Veterans Hospital, where they were served lunch and taken on a tour of the premises.

The Gaston County Auxiliary has surpassed its former record of excellence this year. It is proud, and justly so, of having attained 100 per cent membership (a 20 per cent increase over last year), and of being listed in the Exclusive Club of *Today's Health* for obtaining 104 per cent of its quota for subscriptions. It had the distinct honor of having the state president, Mrs. Powell G. Fox, as a guest at the November meeting and hearing her talk about auxiliary work from the state level. Nurse recruitment was the outstanding project for the year, and received very special attention. A student loan fund was established and immediately used. The meetings were well attended and the programs were interesting and timely. All assignments have been carried out faithfully and generous donations made to all auxiliary causes. A hospital was given \$100.00 to help defray expenses of furnishing the nurses' lounge. The councilor, during her yearly visit, was impressed anew with the friendly cooperation and efficiency of this auxiliary, and was not surprised at its continued success.

The outstanding achievement of Lincoln County this year was its wholehearted participation in the program of the Red Cross Blood Bank. The group is sponsoring a meeting for women put on yearly by the Lincoln County Health Department, and one of its members, a doctor in her own right, will be in full charge of the program. The auxiliary worked diligently last year for a swimming pool for the recreation department, and is now sponsoring a drive to raise money for its maintenance.

Mecklenburg County Auxiliary has been unusually active in all civic agencies and enterprises. The auxiliary was honored in November by a visit from the state president, Mrs. Powell G. Fox, who spoke of auxiliary affairs throughout the state. Nurse recruitment was the main project, and was presented to the public in every available manner, ranging from a display of nurses' caps and uniforms in a department store window to a televised panel discussion. The Student Loan Fund, greatly augmented by proceeds from a rummage sale and the passing of the piggy bank at meetings, is for the first time financing a student through three years of training. Local activities include work in the medical library, the TB Seal Association, and the annual diabetic survey of the medical society. The druggist auxiliary was aided in the collection of drug samples for a Korean Mission Hospital.

All auxiliaries have continued their traditional parties for doctors and teas for new members, and are making plans to celebrate Doctors' Day, each in its own unique way.

Mrs. Thomas H. Byrnes

Eighth District

The Eighth District of the Medical Auxiliary is so proud to have won the silver wine cooler for the third year; it has thus become our prize possession. The \$25.00 that accompanied the award went to our nursing scholarship. At our fall District meeting, we voted again to sponsor the Eighth District Nursing Scholarship, which will be given to a high school girl graduate in the district who is going into nurse training. This year each auxiliary will recommend a girl for the award and the committee will select the winner from this group.

Our district meeting was held in Elkin. A tour of the Chatham Blanket Mill was planned, followed by a lovely tea, dinner with the doctors, and a business session. Nurse recruitment has become our number one aim, and five nurses are receiving training because of auxiliary help. The Greensboro Branch is helping a nurse in her second year. Forsyth-Stokes has a local nursing scholarship and this year has set up a Student Loan Fund too. High Point has established a Nurses' Emergency Fund of \$100 at High Point Memorial Hospital. Over \$500 has been raised to apply to these nurse recruitment projects.

The two branches of the Guilford County Auxiliary are in their second year, and have proved very successful. Both Greensboro and High Point branches have their local projects, but work with each other on a wider scale.

Our district membership is 356, but will be more before the close of the year. Although most of our money has gone for nurse recruitment, we have contributed to the state projects too! \$72.50 was sent to the Cooper Bed Fund; \$212.50 to the Yoder Bed; \$24.00 to the Student Loan Fund; \$22.00 to the Jane Todd Crawford Memorial, and \$92.00 to the American Medical Education Foundation. Twenty dollars each was sent to the patients in the Cooper Bed, Stevens Bed, and McCain Bed. Besides the money, small gifts, cards, candy, and cookies were sent during the year. Ninety-six subscriptions to *Today's Health* were sold.

Doctors' Day has been a red letter day in all the auxiliaries. Each has planned a special program, ranging from square dancing and dinner parties to editorials in the local papers and flowers sent to the doctors' offices. Of special note was the dinner with which the Surry-Yadkin group honored Dr. Meig Flippin for more than 50 years of medical service. Movies and radio programs were used to bring to the public the meaning of Doctors' Day and why we celebrate it. In the same vein of public relations, the members of the county auxiliaries have helped in all medical drives, Red Cross bloodmobile, community projects, and civic agency boards. Besides nurse recruitment the Eighth District has been active in mental hygiene. The Guilford County Mental Hygiene Clinic is assisted by the auxiliary, and several programs were given in the interest of mental health. Rural health has also been keynoted. The Rockingham Auxiliary this year held luncheon meetings separate from the Medical Society. Emphasis was placed on making the members from the various towns feel a part of the auxiliary and become better acquainted. The public health nurses were invited to attend two of the luncheons. The Guilford group acted as hostesses for the medical forum and symposium held at the Jefferson Country Club. Three of the organizations have yearbooks, which are issued to all doctors' families. In the

Forsyth-Stokes county transportation was furnished to take children to Crippled Children's Center.

We regret the loss of the Randolph County Auxiliary and hope that it can be reorganized in the near future.

I find a warm and cooperative spirit among all the auxiliary members, and it is a joy to work with the group.

Mrs. C. Henry Sikes

Ninth District

The Ninth District held its annual meeting in Lexington on September 28. Approximately 50 members were present for the business session and social hour which followed. Each county president gave a brief report of activities and a summary of projects to be carried out during the year. The total amount contributed to our various funds was \$264.00, which was an increase of more than \$100 over last year. Each county auxiliary participated in caring for guests in our TB beds. Two of our counties have nursing scholarships and another is preparing to start one. One county has a student loan fund for nurses, and all counties in some way or another has helped to arouse interest in the nursing profession. This project has proved to be outstanding in this district. All auxiliaries have helped with the various drives in their communities. Burke and Caldwell counties have had 100 per cent membership for the two years I have been councilor. Doctors' Day reports were interesting and inspiring. Auxiliaries observed the day with dinners, parties, and the traditional red carnations sent to each doctor in the county.

Our president, Mrs. P. G. Fox of Raleigh, was speaker at the District meeting, and gave an interesting and informative talk on the history of the organization of the medical auxiliary. She began with the founding by Mrs. P. P. McCain and brought it up to date by relating the progress of projects sponsored by the auxiliary. Other honored guests at the meeting were Mrs. Zack Owens, wife of the president of the State Medical Society; Mrs. James Barnes, wife of the executive secretary of the Society; and Mrs. John Phillips, daughter of Mrs. Fox.

The councilor's report for 1953-1954 was read by the district secretary, Mrs. John Reece of Morganton, after which the business meeting was adjourned. During the social hour bridge was played, high scorers receiving lovely prizes. Pieces of furniture and other useful articles were given as door prizes.

At 6:00 the ladies joined their husbands for a delightful social hour on the terrace of the club, after which a delicious barbecue dinner was served in the main dining room.

This has been a most enjoyable year, and I feel that the District has cooperated splendidly with me and with the state auxiliary in making it a most profitable one. My contacts with the auxiliaries have surpassed those of last year, and it is a grand feeling to note the increase of interest and growth during this short time. In November, the Burke County Auxiliary invited all auxiliaries in this area to meet with them. It was indeed a pleasure to have Mrs. Fox, our president, to be with us. She gave a splendid talk on rural health, followed by a question and answer period.

It is a pleasure to be working in such an outstanding organization.

Mrs. C. M. Kendrick

Tenth District

Up in the Western mountains of our beautiful North Carolina, the Tenth District has had a fruitful year, thanks to the combined efforts of its three

auxiliaries, which report a total of 163 paid members.

Our three groups (Buncombe, Haywood, Henderson) contributed to the Cooper and Yoder Beds, besides making frequent visits to the occupants of the McCain and Stevens Beds and sending gifts for Thanksgiving and Christmas. They also exceeded the amounts sent last year to three of the four funds sponsored by the Auxiliary, with special honors going to Buncombe for giving a generous \$35 to the American Medical Education Foundation. They maintained a high average in the placement of *Today's Health* in doctors' offices, schools, and beauty parlors. They enthusiastically observed Doctors' Day. They furthered the cause of good public relations by participating in community projects such as the Red Cross, United Fund, Civil Defense, Bloodmobile, and Hospital Aid. Each of the three groups in its own way took an active part in nurse recruitment.

In addition to these common activities, each auxiliary was busy with its own special projects locally:

Henderson, beside acting as hostess for the County Medical Society meetings, concentrated on aid for the Margaret M. Pardee Memorial Hospital, providing current magazines and a radio for the central waiting room.

Haywood worked hard and long on a community project called the "Clothes Closet," maintained for the benefit of needy school children. They also gave several benefit bridge parties, and arranged entertainment and a program for visiting doctors' wives at the time of the Mountain Symposium.

Buncombe aided the local medical library, decorated for the medical society's Christmas dinner dance, entertained the wives of the Tenth District during the fall symposium by giving a luncheon and fashion show, and contributed to the newly organized St. Joseph's Hospital School for Practical Nursing. Buncombe's big project, however, was the provision of a full nurse's scholarship for three years.

The sum total of all these activities has resulted, we think, in that highly desirable state of affairs known as good public relations. Every effort will be made to maintain it in every possible way.

Mary Ester Crump

Report of American Medical Education Foundation Chairman

Thirty-one county auxiliaries have donated to the Foundation.

Ten of these have done so in honor of Doctors' Day.

Total amount of gifts is \$1061.25.

Haywood County plans a benefit bridge, Forsyth-Stokes an informal dance, and Richmond a magic show, all profits to be given to the American Medical Education Foundation. We appreciate these counties putting on these special events and are grateful for the increased interest in this project throughout the membership this year.

Mrs. Ledyard DeCamp

Report of Auxiliary News Editor

Your *Auxiliary News* has come out on its usual schedule: July 15, October 15, January 15, and April 15. Emphasis was again placed on county and district news, and it was pleasant to watch the list of contributing reporters on the masthead grow with each issue. There were still too many counties not heard from, however.

Another regular feature of your *News* was a regular column written by your roving and conscientious president. With the hope that the members of the Auxiliary would feel better informed

on and therefore closer to their president if they knew more about her Auxiliary activities, we asked Mrs. Fox to write a "report to the membership" for each issue. This she has done with grace and humor. Those who read her "fireside chats" were warmed by her sincerity of purpose, her integrity, her grasp of the problems facing the Auxiliary, and her infinite patience. The president's column served also in giving Mrs. Fox another means of sending messages to her official family; reminders, thank-yous, and announcements found their way into print via her column.

With the help of our tireless and warm-hearted treasurer (who was your *Auxiliary News* editor just last year), the mailing list has undergone close scrutiny and sharp revision. The hours spent thus should improve the mailing situation, but until all counties send two lists to the editor—one list of new members and one of dropped members—the mailing list will continue to be a problem.

Editing the *Auxiliary News* has been a pleasant task, primarily because of the help of the counties who have consistently mailed in clippings and other reports; because of the untiring ears and minds and hands of your president, Mrs. P. G. Fox, and your treasurer, Mrs. Joseph M. Hitch; because of the interest of other key members; and also because editing the *Auxiliary News* means the privilege of working with and getting to know some of the people in the Hospital Savings Association of North Carolina, who publish our *News*. It is a pleasant and warm organization from the receptionist right on up the stairs to the Public Relations Department, where Mary Nies and her co-workers are always ready to help. I wish there were some adequate way for the Auxiliary to the North Carolina Medical Society to thank Mary Nies and her organization for their work on our behalf.

The cost of editing and mailing the *Auxiliary News* in 1954-1955 was:

Summer Issue.....	\$ 27.17
Fall Issue.....	27.21
Winter Issue.....	25.62
Spring Issue (estimate).....	30.00
1955 mailing permit.....	10.00
1 cut, Summer Issue.....	4.10
1 cut, Winter Issue.....	5.75
Telephone calls, Chapel Hill.....	1.13
Postage .....	.99

\$131.97

Mrs. George W. Paschal, Jr.

Report of Awards Committee 1954-1955

1. Mrs. G. M. Billings Award (\$5.00) for first county with 100 per cent dues paid. To Lee County, Fifth District; Mrs. Waylon Blue, Sanford, President.

2. Dr. Thomas Leslie Lee Memorial Award (\$5.00) for the largest contribution to the Cooper Bed Fund. To Durham-Orange Auxiliary, Sixth District; Mrs. Kempton Jones, Chapel Hill, President.

3. Mrs. B. Watson Roberts Award (\$5.00) for the largest contribution to the Student Loan Fund. To Gaston County Auxiliary, Seventh District; Mrs. P. L. Freeman, Bessemer City, President.

4. Mrs. Frederick R. Taylor Award (\$5.00) for doing the most to advance nurse recruitment. To Forsyth, Stokes Auxiliary, Eighth District; Mrs. Winston Roberts, Winston-Salem, President.

5. Mrs. Karl Pace Award (\$5.00) for sending in the largest number of subscriptions to *Today's Health*. To Mecklenburg County Auxiliary, Seventh District; Mrs. G. Aubrey Hawes, Charlotte, President.

6. Mrs. Powell G. Fox Award (\$5.00) for making the largest contribution to the American Medical Education Foundation. To Gaston County Auxiliary, Seventh District; Mrs. P. L. Freeman, Bessemer City, President.

The Dr. Rachel Davis Award—In order to increase interest in the less populous areas it was decided to divide the ten districts into two groups as follows:

Group 1. Composed of Districts Three, Four, Six, Seven and Eight.

Group 2. Composed of Districts One, Two, Five, Nine and Ten.

The Davis Cup, as such, to be dispensed with. In its place a cash award of \$25.00 to be given to the district in *each group* making the highest record of achievement.

These awards this year go to:

GROUP 1. (\$25.00) Fourth District, Mrs. Harold E. Wolfe, Goldsboro, Councilor.

GROUP 2. (\$25.00) Ninth District, Mrs. Charles M. Kendrick, Lenoir, Councilor.

Mrs. Donnie M. Royal, Chairman
Mrs. Karl B. Pace
Mrs. Erick Bell

Report of the Bulletin Chairman

As of February 20, 1955, there are 101 subscribers to the *Bulletin* in our state. Subscriptions broken down monthly are as follows:

June, 1954—Central Office reported.....	64
September, 1954.....	67
October, 1954.....	75
November, 1954.....	80
December, 1954.....	84
January, 1955.....	101

Beaufort Auxiliary District 2, Mrs. W. C. Piver, Jr., County Bulletin Chairman, reports 100 per cent *Bulletin* subscribers!

Mrs. James F. Reinhardt

Report of the Civil Defense Chairman

Due to incomplete returns from all active auxiliaries it is difficult to evaluate our Civil Defense Programs and services. However, 24 auxiliaries reported, and of these, 13 indicated that a program, or a phase of a program, was given. Several counties have had "alert drills," and "air raids," and our Auxiliary members participated and offered services. It is my belief that more and more of our auxiliaries and individual members are cognizant of the need for a Civil Defense organization.

As state chairman I have met with the North Carolina State Director of Civil Defense and have used the resources of that office for my material. The county auxiliaries were placed on the Civil Defense mailing list in their respective localities. All releases dealing with women's activities in the National and State Civil Defense offices were sent to me through the courtesy of Mrs. Alma Boyd Weaver, director of Women's Services, North Carolina State Defense Office.

I addressed the Third District Auxiliary meeting on February 8, 1955, and as speaker outlined the needs for an adequate Civil Defense coverage and the ways in which we as an Auxiliary may serve.

The North Carolina State Auxiliary was given an acknowledgement in the *North Carolina Handbook for Women*, issued by the Civil Defense office. This acknowledgement was for our interest and cooperation.

As your State Auxiliary chairman, I feel that my work has not met the standards of my ambition, but I hope that what has been started will become more important to each of us and that as a group of women we will accept our responsibilities in the

Civil Defense program of the nation, state, and community.

I wish at this time to express my appreciation to Mrs. Fox, our president, for her encouragement, patience, and assistance.

Mrs. A. L. Chesson

Report of the Doctors' Day Chairman

For the doctor's wife, every day in the year is Doctors' Day. For the doctor himself, no day is really his. For the general public, Doctors' Day has always been a day when some crisis arose in the family, a day of personal need because of illness or accident. However, March 30, 1955, was a very special day for the doctors of North Carolina, their wives, their patients and prospective patients—which includes everybody.

The 33 auxiliaries reporting on the observance of Doctors' Day this year attest to the fact that the original purpose of the day is no longer a dream in the hearts of a few, but an accomplished fact in the pattern of life for almost every community within the boundary of our state. As never before, people were made aware of the contribution of the medical profession to the abundance of life, and the individual doctor was made conscious of being loved and appreciated.

Every auxiliary in the state was notified late in January, and suggestions for the observance of Doctors' Day were furnished. In a number of instances there was further correspondence. Emphasis was placed on the American Medical Education Foundation as a significant way to recognize and honor our doctors on their day. This idea met with at least a measure of approval as evidenced by the increase in donations.

The statistics are as follows: 33 auxiliaries reported observance of Doctors' Day. Observances included dinner parties—with and without entertainment, red carnations to doctors, newspaper articles and editorials, radio talks, store window displays, sermons and flowers in churches, and notices in church bulletins, remembrances to aged and ill doctors, decoration of the graves of deceased doctors, donations to the American Education Foundation, personal letters and cards to doctors, poems on breakfast trays of hospital patients to cheer and stimulate thinking, proclamations by mayors, nurse scholarships, nurse recruitment projects, and informative programs before other organizations.

Though statistics are called cold, the story behind the statistics is warm and pulsating with life. It constituted a real, vital, and spiritual experience to receive and read the reports that were filled with so much human interest. This report does not include the whole story either. It is certain that there were groups observing Doctors' Day of which I have no record. Information has reached me informally of such, but those who officially reported are: Tri-County, Person, Moore, Wilson, Pitt, Iredell-Alexander, Chowan-Perquimans, Haywood, Johnston, Robeson, Mecklenburg, Cabarrus, Beaufort, Cumberland, Gaston, Rockingham, Scotland, Rowan-Davie, Durham-Orange, Wayne, Columbus, Lee, Guilford-High Point branch, Guilford-Greensboro branch, Harnett, Buncombe, Wilkes-Alleghany, Onslow, Wake, Surry-Yadkin, Bertie-Gates-Hertford, Pasquotank-Camden, Currituck-Dare, Carteret.

All reports were good. Some were outstanding. But the Greensboro branch of Guilford County deserves special acclaim for the form of its report as well as the activities involved. It is indicative of their "all-out" effort to give real meaning to the day.

Mrs. Ben Royal

Report of the North Carolina Family Life Chairman

I met with the State Family Life Council in Asheville, North Carolina on October 24, 25, and 26, 1954. A discussion was conducted on some of the objectives of our council on a state level.

The following three were proposed:

1. To try to get courses on family living in all high schools on the state level.
2. To try to get receiving homes for juvenile offenders located in districts according to population.
3. To try to get juvenile age limit raised from 16 to 18 years.

The conference was held in conjunction with the Southeastern Conference on Family Living. I found it a most interesting and stimulating conference and hope that more doctors' wives will be among those present at future meetings.

Mrs. J. D. Stratton

Report of the Historian

The Auxiliary continues to grow, with the addition of many new members and the organization of several new county units. Reports were received from 36 units indicating a growing enthusiasm in the projects undertaken.

The most historically significant accomplishment of the year seems to be in the field of nurse recruitment, with many county auxiliaries sponsoring the training of a particular student nurse.

Members have contributed their time and talents to many worthwhile civic projects, such as making cancer dressings and helping staff blood bank programs, diabetic clinics, and so forth. Participation in these and other activities has naturally helped to promote better public relations.

Generous contributions have been made to the various funds supported by the Auxiliary—namely, the Jane Todd Crawford Memorial, Cooper Bed, Yoder Bed, Student Loan Funds and American Medical Education Foundation. Occupants of all four sanatoria beds have been remembered with gifts and visits throughout the year.

Many counties are making special projects of promoting subscriptions to *Today's Health*.

Plans are underway for the annual observance of Doctors' Day by the presentation of flowers, parties, and the use of various forms of publicity.

Mrs. Herbert Hadley

Report of the Jane Todd Crawford Memorial Fund

With pleasure I report that there seems to be new interest in the Jane Todd Memorial Fund, in that several counties have donated this year which have not donated previously.

On October 31, 1954, a check for \$182.50 was sent to Mrs. J. Ullman Reaves, as North Carolina's donation. This amount was outstanding, and I feel proud of North Carolina's excellent auxiliaries. Mrs. Reaves expressed her pleasure and appreciation, stating that it was the largest check ever received from any Auxiliary. Thanks to all my associated workers.

To date, 27 counties have donated the sum of \$101 to this Fund. Many are yet to be heard from, but I feel sure that they will rally to the cause. Personal thank-you notes have been sent to each donor.

In regard to the new Short Form Record which was instituted this year, the response has been slow. Twenty-two out of 52 counties have responded.

Several requests for information concerning the purpose and use of the fund have been responded to. No applicants have made inquiries. The information was requested by auxiliaries.

Mrs. W. C. Piver, Jr.

Report of the Legislative Chairman

As chairman of the Legislative Committee for the Auxiliary to the North Carolina State Medical Society, I wish to submit the following report:

At the beginning of the year, your chairman mailed out 102 outlines of our Legislative programs as drawn up by the Legislative chairman of the Woman's Auxiliary to the American Medical Association. Two copies were mailed to each county president with instructions to give one to her Legislative chairman, and keep one for her file. Each county president and chairman has been urged to send her name and address to me or directly to the American Medical Association's office in Chicago to be put on the mailing list of the Washington Reports, which are sent out from the Washington, D. C. office. This office has been most helpful in keeping our Auxiliary well informed as to the different bills and other activities, which constantly must hold our attention.

Your president has done an excellent piece of work in sending out questionnaires to the county Legislative chairmen, which I have found most helpful. To date I have received replies from 17 chairmen; this number does not sound very co-operative, but I feel sure if this custom is continued, the county Legislative chairmen will realize the importance of filling out and sending these forms to their state chairmen. The reports from the 17 who responded are as follows:

One county, a newly organized Auxiliary, was receiving reports from Washington, and had also had a program on legislation—a very instructive talk by Dr. W. B. Martin, president of the A.M.A., on its legislation program.

One county did not receive the Washington Reports, but had had a program on legislation by the League of Women Voters.

Three counties received the Washington Reports, but did not have a program on legislation.

One county did not receive the Washington Reports or have a program on legislation, but had instructed their secretary and individual members to write their legislator to urge his support of the appropriation for the mental health center.

Eleven counties did not receive the Washington Reports and did not have any program on legislation.

As you will note from the above reports, these forms are and can be very valuable help to the state Legislative chairmen; so if it is continued, please, you future county Legislative chairmen, fill out the blanks and send them in as requested.

Your chairman has tried to be on the alert at all times, and especially since the Legislature has been in session in Raleigh. She has sent one letter of opposition to the bill introduced by Senator Owens, which was quickly defeated. At this time the Legislature is still in session, but so far there has been nothing too alarming.

In closing this report, permit me to thank each and every one of you for the cooperation you have so graciously given me during the past two years as your chairman of Legislation.

Mrs. M. D. Hill

Report of the Representative to the North Carolina Woman's Council

The president of the North Carolina Woman's Council requested your representative to cooperate with the Extension Division of the University of North Carolina in securing information for the Directory of Information on Woman's Organizations, and to edit the Directory. After some trouble, a sizeable list of statewide women's organizations, with names and addresses of presidents, was sent to the Extension Division for mimeographing, along

with a letter framed by your representative requesting pertinent information. The letter was changed a bit, and return information was requested for the files of the Extension Division. Written requests and a phone call to the Extension Division brought the assurance that eventually your representative would be sent the information.

No notice was received by either the president of the Auxiliary to the North Carolina State Medical Society or your representative as to the date of the fall meeting of the Council. An apology was received by your representative from the Council president. A memorandum was received from the Council later concerning three important items—namely, the annual winter luncheon meeting on February 10, the planning meeting for the Annual Leadership Training Workshop on February 11, and a notice of the vote of the Council to request a contribution of \$2.00 to defray the expense of publishing the Directory.

As the Auxiliary to the North Carolina Medical Society had voted to contribute up to \$10.00 if requested by the Council, your representative notified the Auxiliary president and treasurer of the request for \$2.00 to help defray the expense of publishing the Directory. The money was forwarded to the Council.

The North Carolina Woman's Council has cordially invited the membership of the Auxiliary to the Fifth Annual World Affairs Conference on February 10. The Council requests information of the needs of the Auxiliary to be met at the Annual Leadership Training Workshop planned for the summer.

Mrs. C. T. Wilkinson

Report of the Memorials Chairman

The names of departed members which have been reported since May, 1954, are as follows:

Mrs. G. C. Beard.....	Atkinson
Mrs. George W. Black.....	Charlotte
Mrs. R. Payne Beckwith.....	Roanoke Rapids
Mrs. Charles R. Bugg.....	Raleigh
Mrs. J. B. Carlyle.....	Burlington
Mrs. F. L. Carpenter.....	Statesville
Mrs. Ernest Lee Cox, Sr.....	Jacksonville
Mrs. Robert T. Ferguson.....	Charlotte
Mrs. Eugene D. Hardin.....	New Bern
Mrs. B. E. Love.....	Roxboro
Mrs. James R. Morrison.....	Statesville
Mrs. Henry B. Perry, Sr.....	Boone
Mrs. O. F. Smith.....	Scotland Neck
Mrs. William C. Terry.....	Hamlet
Mrs. Robert F. Warren.....	Prospect Hill
Mrs. Paul Whitaker.....	Kinston
Mrs. B. D. Moore.....	Mount Holly
Mrs. Calvin S. Hicks.....	Durham

Mrs. Charles T. Grier

Report of the Mental Health Chairman

The second annual report of the Mental Health Committee shows increased interest and activity, as well as statistical gain. Twenty-six of the 50 organized auxiliaries have made some contact or report during the year. This represents an increase of nine over 1954. Of these, 16 reported group programs and/or other activities as groups or as individual members. Nineteen auxiliaries have appointed Mental Health Chairmen, three of whom have not reported up to this time. One auxiliary with two branches has two chairmen.

To date, 11 auxiliaries have had a speaker or plan to have one soon. Two auxiliaries have had two programs on mental health. Subjects included: (1) speech therapy and remedial reading; (2) a panel discussion by doctors, with emphasis on mental health by the internist and the pediatrician;

publicly supported mental health facilities in North Carolina; education of exceptional children (spastics). Six topics were not specified.

Other activities included: use of movies (2), sponsored radio programs (2), use of TV (1), cooperation with mental health societies (1), assistance in mental health clinics (2), assistance with plans to obtain local mental health clinic (1), plans to observe Mental Health Week (1), cooperation with P.T.A. (3), promotion of three community lectures on mental health (1), and donation of four chairs to the Mental Hygiene Society (1).

Although we show gain, there is still a long road ahead. There are many angles to mental health problems not yet touched, enough for many to pursue in their own particular interest. Even the community fortunate enough to have a mental health clinic can find work to be done from other aspects, as well as participate actively in the work of the clinics.

During the year a pleasant working relationship has been established between the Auxiliary and the Mental Health Society of North Carolina. This organization will supply material about Mental Health Week to all auxiliaries which have appointed mental health chairmen.

We have offered to assist in any way possible the Mental Hygiene Committee of the Medical Society of the State of North Carolina, but, as yet, we have not been called on to serve.

In some manner each of the program suggestions offered by the Woman's Auxiliary to the American Medical Association and the Auxiliary to the Medical Society of the State of North Carolina has been covered.

Mrs. James B. Lounsbury

Report of the Nominating Committee

As chairman of the Nominating Committee of the Auxiliary to the Medical Society of the State of North Carolina I am pleased to submit the following report:

For the office of president-elect, Mrs. Harvey C. May, Charlotte

For the office of recording secretary, Mrs. R. L. Garrard, Greensboro

A letter of endorsement for Mrs. May was received from Mecklenburg County Auxiliary, of which she is a member.

Mrs. Roscoe D. McMillan, Chairman
 Mrs. J. P. Rousseau
 Mrs. G. W. Murphy
 Mrs. J. C. Peele
 Mrs. Charles Gay

Report of the Nurse Recruitment Chairman

The response shown in Nurse Recruitment this year has been very encouraging, with 38 auxiliaries (6 more than last year) participating in the following activities.

Three auxiliaries have organized Future Nurses clubs.

Two auxiliaries contributed to a district scholarship, and eight auxiliaries have "working" scholarships or loan funds.

Five auxiliaries participated in National Nurses Week by publishing newspaper editorials, proclamations, letters and articles, and by sponsoring radio and television spots.

Two auxiliaries donated tickets for students to use for concerts, theaters, and other functions. One auxiliary interested other clubs in donating planters and flowers for their local nurses' home, also provided Y.W.C.A. memberships for students and obtained contributions from other organizations for an Emergency Fund to be used by student nurses.

One auxiliary renewed seven magazine subscrip-

tions (given last year by members) for their local nurses' home.

One auxiliary conducted a tour of a local hospital for all senior high school students in the county, followed up with a full-page picture story in the newspaper, and placed scrapbooks on nursing in all high schools.

One auxiliary aided their local hospital during Student Nurses' Week, and also rented a film which was shown on Career Day.

One auxiliary placed nursing literature in the local high schools.

Two auxiliaries are giving talks in the local high schools on Career Day, with literature and other information given to interested students.

One auxiliary is sponsoring two student and one practical nurse.

One auxiliary sponsored and assisted the local nursing school with a recruitment program in each junior and senior high school in the county, and also presented gifts of clothing to the recipient of its loan fund.

One auxiliary gave two teas, one for colored and one for white high school girls, following it with a tour of the county hospital and a talk by the supervisor of nurses.

One auxiliary conducted two tours through the local hospital, one for white and one for colored students, served refreshments, and followed with a question and answer period.

One auxiliary is planning a program to be given in the high schools consisting of an address by the director of nurses and of the local hospital, showing of a film, and a question and answer period.

One auxiliary is planning a tea for senior high school girls with a nurse present to answer questions.

One auxiliary has plans for a Career Day speaker and the showing of a film. It is also making plans for setting up a loan fund.

Mrs. Joseph P. Smith

Report of the Press and Publicity Chairman

In the fall five of the larger newspapers of the state were sent a comprehensive article covering the annual fall Board meeting held in Chapel Hill. Only one of the papers saw fit to use this article. Plans are on foot at present for complete and all-inclusive coverage of the annual meeting of the Auxiliary to the Medical Society of the State of North Carolina at Pinehurst in May.

I have received no articles for publication from anyone in the state; consequently activity has been at a minimum.

Mrs. Charles M. Norfleet, Jr.

Report of the Program Chairman

In keeping with the proposed program of the National Auxiliary, our county auxiliaries have emphasized "Be Informed—Serve your Community In Health."

With appreciation to our state president for devising a simplified and informative type of report, we find that program topics throughout the state have been:

	No. Auxiliaries
Community Service.....	9
Civil Defense.....	6
Legislation.....	3
Public Relations.....	10
Nurse Recruitment.....	15
American Medical Education Foundation.....	6
Mental Health.....	13

As is obvious, Nurse Recruitment has been predominant among program topics, with Mental Health and Public Relations following closely. In

addition to those topics listed, there has been special interest in Arts and Hobbies, Doctors' Day, Hospital Operations, Diabetic Detection, Problems of the Aging, Rural Health, New Developments in Medicine, and by all means, just becoming acquainted as doctors' wives.

Mrs. Charles H. Gay

Report of the Projects Chairman

Twenty auxiliaries report the following activities and projects:

Nurse recruitment was definitely the most outstanding project. Seventeen auxiliaries report work on this program. There were eight scholarships and two student loan funds reported. Donations of gifts and of money were made to nurses' homes. Nurse recruitment through the schools was reported by five auxiliaries.

Only seven auxiliaries reported contributions to the beds and to the various funds. I feel sure that other auxiliaries neglected to report contributions. One auxiliary made a substantial contribution of \$258.00 to beds and to the A.M.E.F.

Work on *Today's Health* was also reported by only five auxiliaries; one auxiliary had its members subscribing 100 per cent. One reported placing magazines in all school libraries, while another placed them in all beauty parlors.

Hospital work reported is listed briefly; book carts placed in hospitals, volunteers for medical library, improvements to Doctors' lounge and library, gift to hospitalized children at Christmas, furnishing lounge in new county hospital, donating wardrobes for needy TB patients, and folding cancer dressings.

Mental health was listed by one auxiliary as its most outstanding project. In connection with this, plans have been made to observe Mental Health Week in April.

Rural health and public relations were listed as projects by two auxiliaries. One is sponsoring a TB x-ray trailer, and another auxiliary furnished necessary help for local diabetic survey.

Mrs. Henry Temple

Report of the Public Relations Chairman

One of the main purposes of our Public Relations program this year has been to make every member aware of her responsibility to the community through service. Also of prime importance has been our effort to acquaint the public with the activities, purposes, aims, and accomplishments of the Medical Association and its Auxiliaries.

I received reports from a large number of county auxiliaries, and almost all mentioned the many wholesome cooperative relationships with other agencies serving the community. These include the Y.W.C.A., Scout organizations, the Salvation Army, United Fund Campaign, and the different health drives, such as the Cancer, Polio, and Heart Fund Campaigns. Many were also energetic workers for the bloodmobile. Onslow County members were influential in obtaining a blood bank for their new hospital.

Members of the Guilford County group, in addition to their many other activities, helped organize muscular dystrophy groups in Greensboro and High Point. They also helped chauffeur old people to their "Golden Age" meetings.

Again this year, nurse recruitment was a most important project, and the response of the Auxiliaries on this work was encouraging. New nurse loan funds and scholarships were started in several counties. Lee County reports an especially ambitious nurse recruitment program, which included a tour of local hospitals for senior girls in the county high schools, and appropriate newspaper publicity. Burke

County's plans for a Nurse Recruitment Week later in the spring include a window display showing nurses' caps from different hospitals throughout the county. The Burke County group also sponsored a booth at the county fair last fall, which featured *Today's Health* and sought to stimulate interest in its wider distribution.

Several auxiliaries reported special public relations programs with excellent speakers, and also rural and mental health programs. Rockingham County invited the county health nurse to attend their program on mental health.

Edgecombe-Nash Auxiliary members were again requested by their county medical society to organize a diabetic detection center for one week. They staffed it with six members daily, and did all the clerical work.

Many county auxiliary members are doing volunteer work in local hospitals and are active in hospital auxiliary work. Henderson, Wilson, Surry-Yadkin, and Durham-Orange deserve special mention. The Durham-Orange Auxiliary is composed of members of Duke, Watts, and North Carolina Memorial Hospital Auxiliaries—all very active. They have been called upon to help organize new auxiliaries elsewhere, and have responded with their usual energy and enthusiasm.

Beaufort members operate a "Welcome Wagon" for new families in town. Pitt and Gaston Counties have plans for public health fairs to be held later in the spring.

Judging by the fine reports I received from a large number of county chairmen, many members have felt a personal responsibility to assist in creating better public relations, and have truly been good-will ambassadors.

Mrs. Taylor Vernon

Report of Radio and Movies Chairman

Eighteen counties made an annual report.

Eight counties reported they had not been active.

Counties:

Pitt

1. Radio participation for nurses day
2. Radio announcements for Doctors' Day
3. Health Fair in April

Robeson

1. Radio transcriptions—"Hi Forum"
2. Radio transcriptions—"Training Up A Child"
3. Movie—"Farewell to Childhood"

Beaufort

1. Radio in conjunction with cancer, TB, and polio drives

Forsyth

1. Spot radio announcements throughout Nurse Recruitment Week
2. Nurse recruitment film shown on television

Johnston

1. Film for Honor the Nurse Week

Wilson

1. Radio interview with president of Auxiliary concerning Auxiliary projects
2. Transcription for Doctors' Day
3. Transcription for nurse recruitment

Lee

1. Movie on nurse recruitment to be used for "Career Day" at local high school

Rockingham

1. Radio transcriptions used for National Nurses Day

Guilford

1. Spot radio announcements as a public service

First District

Organized into local groups this year. Hopes to be active next year. Craven, Tri-County,

Wake, Iredell-Alexander, Mecklenburg, Sampson, Wayne, and Franklin were reported inactive.

Mrs. William H. Romm

Report of the Research Chairman

Copies of "Program of Research, 1954-1955" were distributed in the president's package at the fall meeting in Chapel Hill.

Six counties sent name of research chairman.

Two research chairmen sent reports.

The Forsyth-Stokes Medical Auxiliary reported the following outstanding accomplishments for the year:

1. Establishment of a local nursing scholarship to be awarded annually
2. Establishment of a student loan fund at a local nursing school and enlistment of outside support
3. Contributions to the A.M.E.F. for Doctors' Day observances

The Rowan-Davie Medical Auxiliary reported the following for the year 1954-55:

1. Paid expenses of student nurse from local hospital to nurses' annual convention in Durham
2. Made donation to A.M.E.F. in honor of Doctors' Day

Short biographies of the following doctors were sent to the research chairman of the Southern Medical Association:

1. Dr. Hubert Ashley Royster, Raleigh:
President—North Carolina Medical Society, 1922
President—Southern Surgical Association, 1926
President—Tri-State Medical Association of Virginia and Carolina, 1905
2. Dr. John B. Ray, Rockingham County—"A Family Doctor"
3. Dr. Henry Francis Kinsman, Hamlet
4. Dr. Rachel Davis, Lenoir
5. Dr. Hilda Bailey, Salisbury
6. Dr. Owen Moore, Charlotte:
President—North Carolina Medical Society, 1945

Newspaper clippings reporting the following honors bestowed upon, and outstanding accomplishments of, North Carolina doctors included in material sent to the research chairman of the Southern Medical Association were as follows:

1. Dr. Winston Roberts of Winston-Salem received a grant of \$7,000 from U. S. Public Health Service in support of a research project on glaucoma.
2. Picture of Captain Julius Ammons Howell, former eye, ear, nose, and throat doctor of Winston-Salem, now personal physician to President Syngman Rhee of Korea, receiving from the President the Korean Order of Military Merit.
3. Account of the blood flowmeter developed by Dr. Adam B. Denison of Winston-Salem, together with Dr. Harold Green and Dr. Merrill Spencer.
4. Research grant received by Dr. Camillo Artom of Winston-Salem to continue his studies on the effect of choline in the human body.
5. Account of Baptist Hospital, Winston-Salem, opening of new x-ray department. Twenty-five thousand patients are expected first year.
6. Numerous other small clippings of doings of North Carolina doctors to bring that file up to date.

Mrs. Bob Lewis Field

Report of the Revisions Chairman

Since a number of changes in and additions to the By-Laws of the Auxiliary to the Medical So-

ciety of the State of North Carolina were necessary at this time, it was deemed advisable to revise the entire By-Laws, incorporating these changes and additions, and making for greater clarity. A total of 13 changes were necessary. These included mainly the addition of the Yoder Bed to Article VIII—Finances (Section 3 and Section 5) and American Medical Education Foundation (Section 7); Article XII—Student Loan Fund (Section 1 and Section 3); Article XIII—Sanatoria Bed Endowment Fund (Section 1) and Article XV—Standing Committees (Section 2) and the addition of Section 6 to Article XVI—Affiliation with Southern Medical Auxiliary.

Plans are underway to combine Article XI and Article XIII, since both deal with the Sanatoria Beds and Endowment Funds. It is hoped that these changes and revisions will make the By-Laws more compact and understandable.

These changes will be presented to the Executive Board of the Auxiliary at the May meeting in Pinehurst, and, if approved, a new set of By-Laws will be prepared and mimeographed for distribution to the membership.

Gertrude P. Garrard

Report of the Rural Health Chairman

The Medical Society of the State of North Carolina under the direction of its Rural Health Committee has for several years been spearheading the North Carolina Annual Rural Health Conference. The Medical Society felt that these meetings were important, had done much good, and created widespread interest in rural health, but the Society felt that its program was not rapidly attaining the desired proportions. They called upon their cooperating agencies to join them at a meeting in June for making this year's North Carolina Rural Health Program more complete. At this time five pertinent statements were given for consideration in planning a rural health program for this year. They were:

1. Give more guidance and purpose for lay interest.
2. Motivate leaders of groups so they can make changes for improved states of personal and community health.
3. Make everyone more "conscious" of their rural health problems.
4. Keep specific things in mind to emphasize for rural health during the year.
5. Include all people possible in your rural health program.

At the Rural Health Conference at Raleigh in September this type of rural health plan was started by first evaluating our rural health program thus far, its results, and its need. This was a very enlightening meeting and a challenge to all present. The response to this type of program has been most encouraging. It has aroused interest and brought requests from rural health leaders all over the state interested in the total rural health program for more than just the one meeting in Raleigh, which limits the participation of interested people because of the inability of some to attend at that particular time or place. Accordingly we plan to have two more meetings this year. Both meetings will be in March—one in the eastern part of the state, in Greenville; the other in the west, at Asheville.

The interest in rural health from the various auxiliaries this year has shown considerable increase over last year. More auxiliaries appointed Rural Health chairmen this year than the year before. Out of 10 districts, I have heard from auxiliaries in every district but two. More auxiliaries were heard from in the Fifth District than any of

the others. However, five auxiliaries in other districts had outstanding reports:

1. Beaufort gave two lectures to the Salvation Army:
 - a. Human growth and development
 - b. Planning for a home
2. Pitt was hostess to a Rural Health meeting in March
3. Columbus furnished monthly transportation for children to the Orthopedic Clinic in adjoining county
4. Wayne plans to provide TB skin tests for all first grade students in rural areas
5. Wilson
 - a. Sent 500 letters to rural people inviting them to a Heart forum sponsored by the Heart Association
 - b. Helped doctors gather information for medical forum for rural and urban people sponsored by county medical society
 - c. Presented radio transcription explaining needs and opportunities for student nurse training
 - d. Sent representatives to Rural Health Conference in Raleigh

I plan to get in touch with each Auxiliary in the state concerning the two Rural Health meetings in March to encourage their interest and attendance at each. I shall enclose the new pamphlet, "Check Your Health," published by the State Rural Health Committee, along with a tentative program outline for these meetings to each auxiliary. I plan to attend each of these meetings and hope to see the auxiliaries well represented there.

This being my last year as your state Rural Health chairman, I would like to say that it has been a great pleasure and privilege to work with such an inspiring group. The Rural Health program has aroused much interest throughout North Carolina, and it is our hope that it may continue to gain momentum.

Mrs. Edgar T. Beddingfield

Report of the Scrapbook Chairman

At the meeting of the Executive Board in September, 1954, a written request was made that each county scrapbook or publicity chairman collect newspaper clippings from their local papers throughout the year and send them to the state Scrapbook chairman.

In March, 1955, a reminder was sent to each Scrapbook chairman to have all clippings in by April 15, 1955.

The Scrapbook will be compiled and displayed at the annual meeting at Pinehurst in May.

Mrs. L. J. Parsons

Report of the Student Loan Chairman

Contributions to the Fund this year amount to \$84.00.

Your chairman attended the fall Board meeting in Chapel Hill, September 8, 1954. At this meeting a prepared sheet containing information about the Student Loan Fund, its history, times used, amount now in fund, and instructions for obtaining a loan was given to each board member and county president. There was also a recommendation concerning an amendment to the By-Laws of our Constitution broadening the possible use of the Student Loan Fund. This was given to the Revision Committee and will be finally acted upon by the House of Delegates at the annual meeting in May.

Letters of inquiry were received from the following:

Mrs. J. W. Ormand, Monroe, November 1
Dr. W. Reece Berryhill, Chapel Hill, November 8
Thomas W. Payne, Chapel Hill, November 18

Mrs. Simmons Patterson, New Bern, January 24
These letters were answered and information asked for was given to the best of my ability.

No extra effort was made to stimulate donations to this fund as no part of it is in use at the present time, and so many other calls were made during the year.

It is the hope of your chairman that next year with restrictions lessened as to whom loans are to be made, this fund may be put to good use.

The total amount in the Student Loan Fund under the above date (February 10) is \$2,384.40. Eleven counties have contributed. Gaston with \$25.00 is the largest contributor.

My sincere thanks go to all those who have contributed to this Fund during the past year.

The Thomas Leslie Lee Memorial Scholarship Fund has a deposit of \$75.00 with Mrs. Hitch, the treasurer. Some disposition as to the use of this money is being planned; upon which action will be taken at the annual meeting in May.

Mrs. Roscoe D. McMillan

Report of the Thomas Leslie Lee Fund

The purpose to which this fund has been directed deserves some note, and sincere thanks go to the second vice president and chairman of activities, Mrs. William P. Richardson, Chapel Hill, Mrs. R. D. McMillan, Student Loan Fund chairman and their committee, for working out a means of removing it from idleness into useful service.

The following two letters attest to the fact that its recipients are most grateful, and explain how the money is to be used. The Auxiliary to the Medical Society of the State of North Carolina is proud of the establishment of the Thomas Leslie Lee, M.D., Memorial Collection—a fitting tribute to a beloved physician.

Mrs. Powell G. Fox, President
Auxiliary to the Medical Society
of the State of North Carolina

The University of North Carolina
Division of Health Affairs
Chapel Hill, N. C.
June 9, 1955

Mrs. J. M. Hitch, Treasurer
The Auxiliary to the Medical Society
918 Cowper Drive
Raleigh, North Carolina

Dear Mrs. Hitch:

On behalf of the Division of Health Affairs Library—the library for the School of Medicine, University of North Carolina—we gratefully acknowledge receipt of your check in the amount of seventy-five dollars (\$75), a gift from the Auxiliary to the State Medical Society.

This money will be used to purchase books for the Thomas Leslie Lee Memorial Collection and will be so inscribed. It is our understanding that the major interest will be in the fields of obstetrics and gynecology, with particular emphasis on cancer of the female generative tract.

As chairman of the Library Committee and special representative of the School of Medicine, I want to personally thank you for your kind gift and for your interest in the library.

Sincerely yours,
W. C. George, Chairman
Library Committee

The University of North Carolina
School of Medicine
Chapel Hill, N. C.
May 30, 1955

Mrs. J. M. Hitch, Treasurer
The Auxiliary to the Medical Society
918 Cowper Drive
Raleigh, North Carolina

Dear Mrs. Hitch:

On behalf of the Medical School of the University of North Carolina I would like to thank you and the Auxiliary for the Thomas Leslie Lee Memorial Fund to be used for the purchase of books that would be useful in teaching and research. The books bought from this Fund will be known as the Thomas Leslie Lee, M.D. Memorial Collection.

Those of us here who knew and loved Dr. Lee are happy to have this fine memorial to him in the School of Medicine.

Cordially yours,
W. R. Berryhill, M.D.
Dean

Report of the Today's Health Chairman

The response to the efforts of your *Today's Health* chairman in attempting to increase the sales of our public relations magazine has been gratifying, as the following facts show:

As of February 20, 1955, 764 subscriptions were sold; 505 were placed in doctors' offices; 114, in school libraries.

The total number sold is an increase of 313 over 1954.

Several county auxiliaries are putting on real projects which are not yet complete. One county reports being named in the 1955 Exclusive Club for obtaining 104 per cent of its quota. Another county reports it received a 159 per cent rating in the National Contest.

Mrs. James D. Whaley

Report of the Councilor to the Southern Medical Association

The bulk of the work done in behalf of the Auxiliary to the Southern Medical Association is carried on by the Doctors' Day, Jane Todd Crawford, and Research chairman, and is incorporated in their respective reports.

I attended the Southern Medical Association Convention November 8, 1954 in St. Louis. As councilor it was my privilege to report on the participation of our organization in the Southern Medical Association projects.

Mrs. Harry L. Johnson

WOMAN'S AUXILIARY BREAKFAST

Wednesday, May 4, 1955

The Woman's Auxiliary Breakfast was held on May 3, 1955, at 9:00 a.m. in the Crystal Room of the Carolina Hotel, Pinehurst, with the president, Mrs. R. D. Croom, Jr., Maxton, presiding.

Mrs. Croom opened the informal session with appropriate remarks. She complimented the work of Mrs. Powell G. Fox, retiring president, and spoke of next year's plans.

Mrs. Harry Johnson, Elkin, retiring councilor to the Auxiliary to the Southern Medical Association, introduced Mrs. Louis K. Hundley of Pine Bluff, Arkansas, president of the Auxiliary to the Southern Medical Association. Mrs. Hundley extended an invitation to attend the Southern Medical

Meeting in Houston, Texas, November 14-17. She stated that the slogan of the meeting could well be "the least possible work with the most possible fun," although there will also be excellent scientific sessions.

The speaker complimented the work of the North Carolina members with their various projects, and expressed her regret at having been unable to attend the first part of the convention.

A guest at the breakfast was Mrs. George Lull of Chicago, wife of the executive secretary of the American Medical Association.

The meeting closed with everyone present giving Mrs. Fox "a big hand" for her excellent and time-consuming work during the past year.

Mrs. Joe Van Hoy (For Mrs.
R. L. Garrard, Recording Secretary)

ROSTER OF AUXILIARY MEMBERS

1954 - 1955

Abbott, Mrs. Robert W. Goldsboro	Anderson, Mrs. W. Banks Durham	Baker, Mrs. Horace M., Sr. Lumberton
Abel, Mrs. J. L.....Waynesville	Andrew, Mrs. Lacy A., Jr. Winston-Salem	*Baker, Mrs. Horace M., Jr. Lumberton
Abernethy, Mrs. Paul M. Burlington	Andrews, Mrs. Robert Jackson Roxboro	*Baker, Mrs. Lenox D.....Durham
Abse, Mrs. David W.....Chapel Hill	*Angel, Mrs. Edgar.....Franklin	Baker, Mrs. Roger D.....Durham
*Adair, Mrs. William E., Jr. Erwin	Angstadt, Mrs. Charles E. Raleigh	Baker, Mrs. Thomas W. Charlotte
Adams, Mrs. Carlisle.....Charlotte	Anthony, Mrs. W. A.....Gastonia	Baldwin, Mrs. William E., Jr. Whiteville
Adams, Mrs. Carlton N. Winston-Salem	Applewhite, Mrs. Calvin C. Raleigh	*Ballew, Mrs. James R.....Raleigh
Adams, Mrs. Charles.....Greenville	Applewhite, Mrs. Calvin W. Statesville	*Balsley, Mrs. Robert E. Reidsville
Adams, Mrs. H. Stewart Winston-Salem	Arena, Mrs. Jay M.....Durham	Baluss, Mrs. John W., Jr. Fayetteville
Adams, Mrs. J. Robert.....Charlotte	Armentrout, Mrs. Charles H. Asheville	Bandy, Mrs. William G. Lincolnton
Adams, Mrs. P. E.....Warrenton	Armistead, Mrs. D. Branch Greenville	Banner, Mrs. Charles W. Greensboro
Adams, Mrs. Rayford K. Morganton	Armstrong, Mrs. Beverly W. Charlotte	Barber, Mrs. John F.....Asheville
Ader, Mrs. O. L.....Walkertown	*Armstrong, Mrs. Charles W. Salisbury	Barden, Mrs. Graham A., Jr. New Bern
Aderholt, Mrs. M. L.....High Point	Arney, Mrs. William C. Morganton	Bardin, Mrs. Robert M.....Durham
Adkins, Mrs. Trogler F.....Durham	Arnold, Mrs. Jesse H.....Kinston	*Barefoot, Mrs. Graham B. Wilmington
Agner, Mrs. Marshall Cherryville	Arnold, Mrs. Ralph A.....Durham	Barefoot, Mrs. Julius J. New Bern
*Agner, Mrs. Roy A., Jr. Salisbury	Ashford, Mrs. Charles H. New Bern	Barefoot, Mrs. Sherwood W. Greensboro
Albright, Mrs. Samuel L. Belmont	*Atkins, Mrs. Stanley S. Asheville	Barefoot, Mrs. William F. Whiteville
Alderman, Mrs. A. M., Jr. Raleigh	Atkins, Mrs. William M.....Windsor	Barker, Mrs. Christopher S. New Bern
Alexander, Mrs. Eben, Jr. Winston-Salem	*Ausbund, Mrs. John R. Winston-Salem	Barnes, Mrs. H. Eugene, Jr. Hickory
Alexander, Mrs. James M. Charlotte	*Austin, Mrs. Frederick D., Jr. Charlotte	Barnes, Mrs. M. Russell Jacksonville
*Alexander, Mrs. Joseph B. Lumberton	Avery, Mrs. Edward S. Winston-Salem	*Barnhardt, Mrs. Albert E. Kannapolis
Alexander, Mrs. William M. Wilson	Aycock, Mrs. Edwin B. Greenville	Barrett, Mrs. John M. Greenville
Allen, Mrs. George C.....Lumberton	Aycock, Mrs. Francis Marion Princeton	*Barrier, Mrs. Henry W.....Concord
Allen, Mrs. LeRoy.....Raleigh	Aycock, Mrs. James B. Statesville	Barringer, Mrs. Archie L. Mt. Pleasant
Allgood, Mrs. John W. Greensboro	*Ayers, Mrs. James S.....Clinton	Barringer, Mrs. Phil L. Windsor
Alsup, Mrs. William B. Winston-Salem	Bagby, Mrs. B. B.....Swannanoa	Barron, Mrs. John I. Morganton
Alyea, Mrs. Edwin P.....Durham	Bahnson, Mrs. E. Reid Winston-Salem	Bartlett, Mrs. Stephen R., Jr. Greenville
Ames, Mrs. Richard H. Greensboro	*Bailey, Mrs. Clarence W. Rocky Mount	Basnight, Mrs. G. G.....Greenville
*Anders, Mrs. McT. G.....Gastonia	Bailey, Mrs. Joseph P. Flat Rock	Bass, Mrs. Robert E., Jr. Chadbourn
*Anderson, Mrs. Elbert C. Wilmington	Bailey, Mrs. Mercer H. Elizabeth City	Baxter, Mrs. Oscar D.....Matthews
Anderson, Mrs. Henry S. Mocksville	*Bailey, Mrs. Robert C.....Concord	Beam, Mrs. Hugh Martin Roxboro
*Anderson, Mrs. John B. Asheville	Baker, Mrs. Barnwell R. Asheville	Bear, Mrs. Sigmond A. Wilmington
Anderson, Mrs. Norman L. Asheville		
Anderson, Mrs. Robert A. Ahoskie		

†Deceased

*Registered at 1955 meeting.

- Beavers, Mrs. Charles L. Greensboro
 Beavers, Mrs. James W. Greensboro
 *Beavers, Mrs. William O. McLeansville
 Beck, Mrs. J. Montgomery Burlington
 Beddingfield, Mrs. Edgar T. Stantonsburg
 Belcher, Mrs. C. Cullen Asheville
 Belk, Mrs. George W. Gastonia
 Bell, Mrs. G. Erick Wilson
 Bell, Mrs. Ira E. Morganton
 Bell, Mrs. L. Nelson Montreat
 Bell, Mrs. Orville E. Rocky Mount
 Bell, Mrs. Spencer A. Hamptonville
 Bell, Mrs. William H., Jr. New Bern
 Benbow, Mrs. Edgar V. Winston-Salem
 Benbow, Mrs. Edward P. Greensboro
 *Bender, Mrs. John J. Red Springs
 Bender, Mrs. John R. Winston-Salem
 Bennett, Mrs. John N. North Wilkesboro
 *Bensen, Mrs. Vladimir B. Raleigh
 Benson, Mrs. Norman O. Lumberton
 Benton, Mrs. George R., Jr. Goldsboro
 Benton, Mrs. Wayne J. Greensboro
 *Berkeley, Mrs. Alfred R., Jr. Charlotte
 *Berkeley, Mrs. William T., Jr. Charlotte
 Berry, Mrs. Francis X. Greensboro
 *Berryhill, Mrs. W. Reece Chapel Hill
 Bertling, Mrs. Marion H. Greensboro
 Best, Mrs. Deleon E. Goldsboro
 *Best, Mrs. Glenn E. Clinton
 Bethea, Mrs. W. Thad Fair Bluff
 Bethel, Mrs. Millard B. Charlotte
 Bever, Mrs. Christopher T. Chapel Hill
 Biggs, Mrs. Dennis W., Jr. Lumberton
 Biggs, Mrs. John Irvin Lumberton
 Bigham, Mrs. Roy S., Jr. Charlotte
 *Billings, Mrs. Gilbert M. Morganton
 Bird, Mrs. Ignacio Greensboro
 Bitting, Mrs. Numa D. Durham
 *Bittinger, Mrs. Charles L. Mooresville
 *Bittinger, Mrs. Samuel M. Black Mountain
 Bizzell, Mrs. James W. Goldsboro
 Bizzell, Mrs. Marcus E. Goldsboro
 Bizzell, Mrs. Thomas M. Goldsboro
 Black, Mrs. John R., Jr. Whiteville
 Black, Mrs. Kyle E. Salisbury
 Black, Mrs. Paul A. L. Wilmington
 Blackley, Mrs. R. J. Hamlet
 *Blackmon, Mrs. Bruce B. Buie's Creek
 Blackshear, Mrs. T. J. Wilson
 *Blackwelder, Mrs. Verne H. Lenoir
 Blair, Mrs. Andrew Charlotte
 Blair, Mrs. G. Walker, Jr. Burlington
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 Bowman, Mrs. Earl L. Lumberton
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 *Boyce, Mrs. William H. Winston-Salem
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 Duckett, Mrs. Virgil H. Canton
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 Erwin, Mrs. Evan A., Sr. Laurinburg
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 Estes, Mrs. E. Harvey. Durham
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 Heusner, Mrs. Albert P. Durham
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 Howell, Mrs. William L. Ellerbe
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 *Johnson, Mrs. Paul W. Winston-Salem
- Johnson, Mrs. W. C. Canton
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 Johnston, Mrs. George B. Asheboro
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 Jones, Mrs. Clyde West Jefferson
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 Jones, Mrs. William R. Wilson
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 Kendall, Mrs. John H. Clinton

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 Kitchin, Mrs. W. Walton Clinton
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 Knox, Mrs. Richard E. Roanoke Rapids
 Kodack, Mrs. Albert. Asheville
 Koon, Mrs. Ethen S., Jr. Asheville
 Koonce, Mrs. Donald B. Wilmington
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 *Koseruba, Mrs. George M. Wilmington
- Kroh, Mrs. Laird F. Charlotte
 Kroncke, Mrs. Fred G. Roanoke Rapids
 Kuttteh, Mrs. Hanna C. Statesville
 Lacy, Mrs. Thomas A. Morganton
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 Lafferty, Mrs. John W. Hickory
 Lafferty, Mrs. Robert H. Charlotte
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 Lake, Mrs. Ralph C. Greensboro
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 Lampley, Mrs. William A. Hendersonville
 Lancaster, Mrs. Newton F. Waynesville
 *Lane, Mrs. Edgar W. Valdese
 Lane, Mrs. John L. Rocky Mount
 Lang, Mrs. Andrew M. Morganton
 Langdell, Mrs. Robert D. Chapel Hill
 Langdon, Mrs. B. Bruce Fayetteville
 *Langner, Mrs. Fred W. Southern Pines
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 Lassiter, Mrs. Will H., Jr. Smithfield
 Latham, Mrs. J. R. New Bern
 LaTourette, Mrs. Kenneth Hendersonville
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 *Lawrence, Mrs. Benjamin J. Raleigh
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 *LeBauer, Mrs. Maurice L. Greensboro
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 *Lee, Mrs. F. Wayne Charlotte
 Lee, Mrs. Mike Kinston
 *Lee, Mrs. T. Leslie Kinston
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 Lennon, Mrs. Hershel C. Greensboro
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 *Leonard, Mrs. Jacob C., Jr. Lexington
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 Lewis, Mrs. John S. Hickory
 Lewis, Mrs. Robert E. North Wilkesboro
 Lewis, Mrs. W. Glenn Gibsonville
 Lichty, Mrs. Joseph S. Greensboro
- Lide, Mrs. Thomas N. Winston-Salem
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 Lilly, Mrs. J. M. Fayetteville
 Lilly, Mrs. William H. Dunn
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 Lindsey, Mrs. Mark McD. Hamlet
 Link, Mrs. M. Robert Charlotte
 Little, Mrs. Henry R. New Bern
 Little, Mrs. Howard L. Gibsonville
 Little, Mrs. Joseph R. Salisbury
 Littlejohn, Mrs. James T. Asheville
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 Lomax, Mrs. Donald H. Salisbury
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 Long, Mrs. David Thomas Roxboro
 Long, Mrs. Glenn Newton
 Long, Mrs. Ira C. Goldsboro
 Long, Mrs. T. Walter Newton
 Long, Mrs. Vann McK. Winston-Salem
 Long, Mrs. W. Lunsford, Jr. Raleigh
 *Long, Mrs. William M. Mocksville
 *Long, Mrs. Zachary F. Rockingham
 Lore, Mrs. Ralph Eli Lenoir
 Lott, Mrs. William Clifton Asheville
 Lounsbury, Mrs. J. B. Wilmington
 *Lovell, Mrs. William F. Charlotte
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 Lowery, Mrs. John R. Salisbury
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 Lupton, Mrs. Emmett S. Alamance
 Lutterloh, Mrs. Isaac Hayden Sanford
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 Miller, Mrs. Robert C.....Gastonia
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 Monroe, Mrs. D. Geddie
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 *Owens, Mrs. Zack D.
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 Parham, Mrs. Asa R.....High Point
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Parker, Mrs. P. E., Jr. Mocksville	Peterson, Mrs. Osler L. Chapel Hill	Pressly, Mrs. James L. Statesville
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*Parker, Mrs. Samuel L., Jr. Kinston	*Phelps, Mrs. James S.....Troy	Prince, Mrs. George E. Gastonia
Parks, Mrs. W. Craig High Point	Phelps, Mrs. John M.....Creswell	*Printz, Mrs. Don R.....Asheville
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Parsons, Mrs. William H. Ellerbe	*Phillips, Mrs. Charles A. Speas Southern Pines	Proctor, Mrs. Richard C. Winston-Salem
*Paschal, Mrs. George W., Jr. Raleigh	*Phillips, Mrs. Ernest N. North Wilkesboro	Pruitt, Mrs. George C. Rockingham
Pate, Mrs. Archibald H. Goldsboro	Phillips, Mrs. William A. Wilmington	Pryor, Mrs. William W.....Durham
Pate, Mrs. James F.....Canton	*Pickard, Mrs. Henry M. Wilmington	*Pugh, Mrs. Charles H.....Gastonia
*Pate, Mrs. James G.....Gibson	Pickrell, Mrs. Kenneth L. Durham	Putney, Mrs. Robert H., Sr. Elm City
Pate, Mrs. Marion B., Jr. St. Pauls	Pigford, Mrs. Robert T. Wilmington	Queen, Mrs. Hugh.....Hamlet
Pate, Mrs. W. H.....Pikeville	*Pishko, Mrs. Michael T. Pinehurst	*Query, Mrs. Robert Z., Jr. Charlotte
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*Patterson, Mrs. Carl N. Durham	*Pittman, Mrs. Dorn C. Burlington	Rabi, Mrs. William E. Winston-Salem
Patterson, Mrs. F. M. Simmons New Bern	Pittman, Mrs. Malory A. Wilson	Rabold, Mrs. Bernard L.....Newton
Patterson, Mrs. Fred G. Chapel Hill	Pittman, Mrs. William A. Fayetteville	Rabold, Mrs. Leonard J. Greensboro
Patterson, Mrs. Hubert C. Chapel Hill	Pitts, Mrs. William R.....Charlotte	Raby, Mrs. William T.....Charlotte
Patterson, Mrs. Joseph F. New Bern	*Piver, Mrs. James D. Jacksonville	Rachlin, Mrs. Stanton A. Fayetteville
Patterson, Mrs. Joseph H. Broadway	*Piver, Mrs. Wm. Crawford, Jr. Washington	*Raiford, Mrs. Fletcher L. Hendersonville
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*Pearson, Mrs. Hugh O. Pinetops	Pollock, Mrs. Raymond New Bern	Rand, Mrs. Cecil H.....Fremont
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*Peck, Mrs. Harold A. Southern Pines	Pool, Mrs. Charles G. Winston-Salem	Rankin, Mrs. Richard B. Concord
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DEPARTMENT OF THE ARMY

Authority from the Civil Service Commission has been received to employ civilian physicians at dispensaries, infirmaries, outpatient clinics, and laboratories at the top step of each respective grade, according to Major General Silas B. Hays, The Surgeon General.

The new authority, which goes into effect immediately, allows the Army to employ civilian physicians at beginning salaries from \$7,465 per annum to \$11,395 per annum.

Although increasing numbers of civilian doctors are being employed in Army medical installations throughout the country, openings exist in practically every locality. As of June 30, according to General Hays, the Army was employing over 20 per cent more civilian physicians than it had six months earlier.

Those interested in securing employment with the Army and who have a license to practice medicine in any of the states or the District of Columbia should get in touch with the personnel officer at their nearest Army installation or Army medical facility of their choice.

* * *

X-ray films of wounded soldiers on the battlefield made with a newly designed portable x-ray unit powered by radioactive thulium will soon be possible according to Major General George E. Armstrong, the Army Surgeon General.

The new device is capable of producing an x-ray picture without electricity, water, or a darkroom. The complete unit, which also includes a film holder, weighs only 48 pounds and may be carried on the back of a medical aid man. Extensive tests at the Army Medical Research Laboratory, Ft. Knox, Kentucky, have proved that the $\frac{3}{4}$ inch lead plate which contains the radioactive thulium protects the user from accidental radiation exposure. Under normal use, the tiny piece of thulium is expected to be effective for about one year, when it will be returned to the atomic pile for rejuvenation.

Operation of the machine is so simple that an average individual can be trained to use it in a few hours. It can be set up, a picture taken, and developed for reading within five to ten minutes. Timing of the exposure is done with a wrist watch.

It is anticipated that each unit will cost approximately \$200. Additional tests, however, must be made before the item can be standardized and placed for commercial manufacture.

VETERANS ADMINISTRATION

Veterans Administration is stepping up a many-sided scientific attack on the growing problem of providing the type of medical care for aging veterans that will enable them to lead useful, happy lives with the maximum freedom from hospitalization.

(The Hoover Commission's Recommendation No. 11 suggested: "The the Veterans Administration emphasize its program of medical care and rehabilitation services for the aging veteran eligible for care, in order to reduce the number of chronic bed cases.")

VA said the need for attacking the problem is reflected in the fact that while only 584,000 of the present 21,000,000 veterans are 65 or over, the number of veterans 65 and over is expected to swell to more than 7,000,000 within the next half-century.

VA activities in behalf of aged patients, it was said, are believed to be important investigations of geriatric and chronic disease problems of particular concern to veterans as a group and to mankind in general.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

The Food and Drug Administration of the Department of Health, Education, and Welfare announced today that it will hire 48 temporary investigators to carry out a special assignment to enforce the federal prescription drug law against possible "black market" distribution of the Salk poliomyelitis vaccine.

The activities of the Food and Drug Administration will be carried out in connection with the voluntary plan for allocation of the vaccine announced recently by the Department under which the states will have responsibility for its intrastate distribution both through commercial and public agency channels.

The duties of the 48 special investigators will be to check on the distribution of the vaccine for the purpose of accounting for all of the vaccine which is made or shipped. Such checkups will be considered complete in regard to any particular lot of vaccine when the F.D.A. has a record indicating its total distribution into legal channels—that is, when it has been determined that the vaccine is in the hands of a physician, a hospital, a state or local health department, or other authorized persons or agencies.

* * *

A competitive examination for appointment of Medical Officers to the Regular Corps of the United States Public Health Service will be held in various places throughout the country on November 15, 16, and 17, 1955.

Appointments provide opportunities for career service in clinical medicine, research, and public health. They will be made in the ranks of Assistant and Senior Assistant, equivalent to Navy ranks of Lieutenant (j.g.) and Lieutenant, respectively.

Application forms may be obtained by writing to the Chief, Division of Personnel, Public Health Service, Department of Health, Education, and Welfare, Washington 25, D. C. Completed application forms must be received in the Division of Personnel no later than October 15, 1955.

* * *

Dr. Kenneth W. Chapman, a Public Health Service medical officer and specialist in narcotic addiction programs, has been assigned to the National Institute of Mental Health in Bethesda, Maryland, to assist states and communities in developing programs of prevention, control, and treatment of drug addiction, Surgeon General Leonard A. Scheele, U. S. Department of Health, Education, and Welfare, announced recently.

As a staff member of the Community Services Branch of the Mental Health Institute, Dr. Chapman will act in a Service-wide liaison capacity through the Public Health Service Regional Offices in providing consultative services to state and community governmental agencies and to voluntary organizations on the medical problems of narcotic addiction. Dr. Chapman, who is a psychiatrist, has been closely identified with narcotic study and treatment programs for nearly a decade. His specialized experience will provide state and local program administrators with authoritative consultative and survey service to guide them in initiating or improving their projects for the rehabilitation of drug users.

NORTH CAROLINA

Medical Journal



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MEDIAN NEURITIS — LOVE

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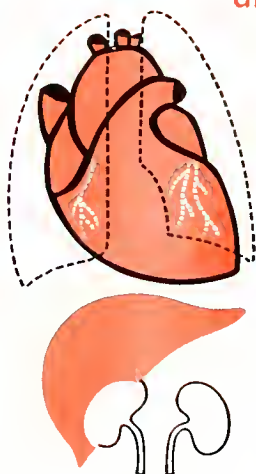
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MEDIAN NEURITIS OR CARPAL TUNNEL SYNDROME

Diagnosis and Treatment

J. GRAFTON LOVE, M.D.

ROCHESTER, MINNESOTA

In 1946 Cannon and I⁽¹⁾ called attention to a not-too-rare condition affecting the median nerve at the wrist which can be corrected by appropriate surgical therapy. We indicated the symptoms, mechanism, and treatment.

Although this condition often arises spontaneously, the term "tardy median palsy" was emphasized at that time because of the similarities that this affection of the peripheral nerve bears to the better known tardy ulnar palsy⁽²⁾.

Report of Case

The first patient with tardy median palsy whom I treated surgically was a white woman 44 years of age who came to the Mayo Clinic January 20, 1941, and gave the following history. About 20 years before coming to the clinic she had slipped and fallen on her outstretched right hand. The resulting fracture of the right wrist was treated by a cast for six weeks. After removal of the cast, the attending physician advised the patient that the result was poor and that he wished to reset the wrist, but she declined to have this done. Ever since the injury she had been aware of swelling over the proximal part of the dorsal surface of the hand. During the past six years this swelling had increased and the patient experienced some dull aching in the right wrist after heavy work. During the last two to three years before admission the discomfort had increased. In addition, some aching had developed and extended up the inner aspect of the forearm and arm to the axilla. This aching was episodic and lasted 12 to 18 hours. About 18 months before coming to the clinic, the patient for the first time noticed wasting of the muscles of the thenar eminence of the right hand. The condition had been slowly progressive. During the past three years she believed that there had been periods of numbness in her thumb and index, middle and fourth fingers, especially after hard work. During the past year she had noticed in-

creasing numbness in the thumb and first two fingers.

At the time of admission the patient often could not tell whether she was holding a needle in her fingers or not, and often when holding a cigarette she would drop it without realizing that she had.

On neurologic examination, only the findings referable to the right wrist and hand were important. A deformity of the right wrist from an old Colles' fracture which had occurred 20 years before, definite atrophy of the thenar eminence, and reduction in sensation in the median distribution of the right hand were noted. There were no findings to suggest involvement of the median nerve above the wrist. Roentgenographic examination of the right wrist revealed an old Colles' fracture with deformity.

At the time that I saw this patient in consultation with one of my colleagues in the neurologic section, this note was made: "I have never heard of tardy median palsy, but this certainly is one in my opinion. Unless orthopedic consultant has something to offer, the median nerve should be freed up and a neurolysis performed."

Since I was unable to assure the patient of a good prognosis, she wished to consider the matter for a time. On February 4, 1941, the operation was performed under brachial-plexus-block anesthesia. The right median nerve was exposed just above the right wrist. The median nerve presented the typical picture which has been observed many times in cases of tardy ulnar palsy. Three centimeters from the transverse carpal ligament the median nerve measured 5 mm. across, whereas at the transverse carpal ligament it measured 1 cm., or twice as much. The transverse carpal ligament was divided, and then it was noted that the ligament had produced a definite constriction across the nerve at the point of emergence of the branch of the median nerve going to the thenar muscles. The median nerve and all its branches were carefully dissected free and then a few longitudinal incisions were made in the sheath of the median trunk with a razor blade in order to release any further pressure on the nerve fibers. The wound was then closed in layers without drainage (fig. 1).

The Syndrome

In January of 1941, when I saw this patient, I was not acquainted with the article on median thenar neuritis which had been published by my neurologic colleague, Dr. F. P. Moersch, in 1938⁽³⁾. He described the

From the Section of Neurologic Surgery, Mayo Clinic and Mayo Foundation,† Rochester, Minnesota.

Read before the First General Session, Medical Society of the State of North Carolina, Pinehurst, North Carolina, May 3, 1955.

†The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

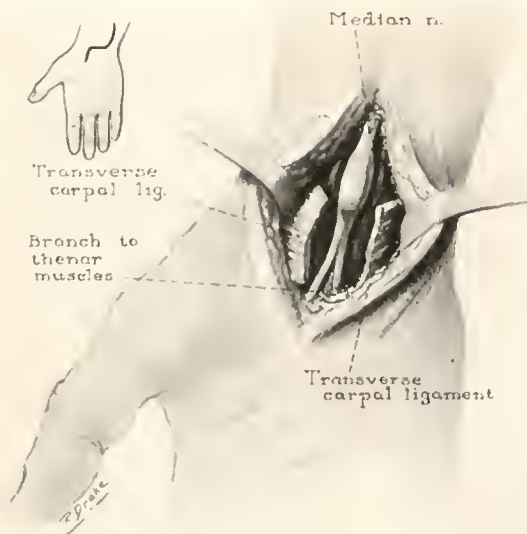


Fig. 1. Compressed median nerve is decompressed by division of transverse carpal ligament. Insert: Type of skin incision employed.

symptoms and signs of involvement of the muscles of the thenar eminence—the abductor pollicis brevis, the opponens pollicis, and the flexor pollicis brevis muscles. He stated:

As a rule the syndrome develops spontaneously, although there may be a history of some injury, inflammatory process or prolonged occupational trauma, producing what may be termed a tardy median thenar neuritis, in contradistinction to an acute median thenar neuritis which develops rapidly as the direct result of trauma to the median nerve in the hand. The explanation for the development of this specific form of median neuritis is probably on an anatomic basis. The median nerve as it passes under the anterior annular ligament of the radius gives off the thenar branch which is entirely motor in its function. This branch which passes to the muscles affected in my case is capable of producing only a motor paralysis. It is likely that the thenar branch, as it emerges under the annular ligament and then swings backward and outward to the muscles, is compressed either by direct trauma or by continued irritation. In some instances paresthesias and even sensory changes are to be observed in the affected area. These sensory disturbances probably are attributable to an involvement of the main trunk of the median nerve at the annular ligament or to injury of a sensory median twig which may be given off at that point. Median thenar neuritis may be either acute or tardy. It does not progress beyond the affected area. In cases in which the atrophy has been present for a considerable period of time, the possibility for return of function is remote. In the early stages of development of the atrophy relief may be obtained by removal of irritating factors or by surgical measures, such as relieving pressure on the thenar branch of the median nerve by section of the anterior annular liga-

ment. It is important to recognize this syndrome, as an incorrect diagnosis of progressive muscular atrophy, tumor of the cervical portion of the spinal cord, cervical rib, or neuritis of the brachial plexus and so forth often is made, indicating a much graver prognosis than the diagnosis of median thenar neuritis.

Since treating this patient, the members of the neurologic, orthopedic, arthritic, and neurosurgical sections of the clinic have seen and treated a large number of patients for median neuritis of the hand.

Involvement of the median nerve at the wrist is a common ailment, although it is not recognized as frequently as it should be. The lack of correct diagnosis is largely due to the fact that the condition is not well enough known and other syndromes which have been known longer and more widely often are considered as the diagnosis. A mistaken diagnosis may result in the patient's receiving a much more unfavorable prognosis or being treated in a manner which is not likely to be of benefit or which carries greater risk to life and limb.

Descriptive Terms

Median neuritis, median thenar neuritis, tardy median palsy, and the carpal tunnel syndrome are one and the same disorder of varying intensity and etiology. The condition is known as "median neuritis" when the trunk of the median nerve at or below the wrist is involved. The involvement may result in both sensory and motor disturbances, although one of these functions may be more severely impaired than the other. The term "median thenar neuritis" is applied when the thenar muscles of the hand are involved and there is resultant weakness or atrophy of this part of the hand due to faulty innervation or atrophy of the opponens pollicis, abductor pollicis brevis, and flexor pollicis brevis muscles, which make up the thenar eminence. This disability is due to involvement of the motor branch of the median nerve which innervates these small muscles (figs. 2 and 3).

The term "tardy median palsy"⁽¹⁾ was introduced in 1946 to designate a disturbance of the median nerve below the wrist in which there is a definite history of injury to the wrist or roentgenologic evidence of malalignment of bones at the wrist which could be expected to narrow the carpal tunnel with resultant encroachment on the domain of the median nerve. The term "carpal tunnel syn-

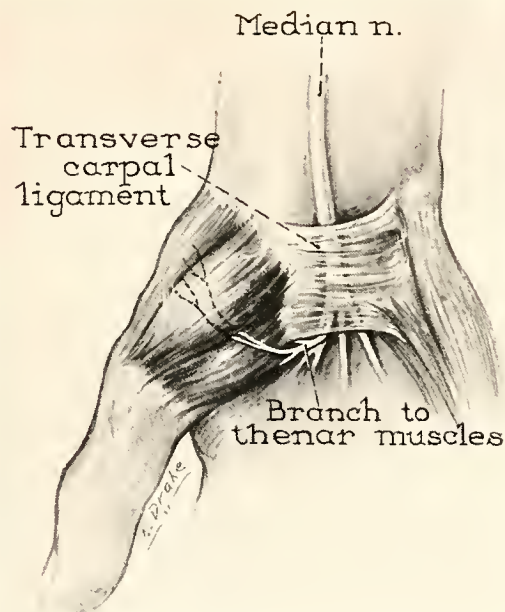


Fig. 2. Anatomy of the median nerve at the wrist and in the palm of the hand. The branch to the thenar muscles, which is often involved, is shown coming across the lower border of the transverse carpal ligament, where it is especially prone to injury.

drome"⁽⁴⁾ was later introduced as an all-inclusive designation for affections of the median nerve due to a supposed narrowing of the channel between the transverse carpal ligament and the carpal bones through which the flexor tendons and median nerve pass.

Diagnosis

The patient, usually a woman of middle age, seeks relief from painful paresthesias involving to varying degrees the thumb and first two or three fingers of one or both hands; or she may consult her physician because of disability in the use of her thumb due to weakness of the thenar muscles. She finds, for instance, that she can no longer pick up pins, sew, or button her clothes with the involved hand. She may or may not have noticed the depression due to atrophy of the bellies of the thenar muscles where the well rounded thenar eminence used to be. One patient, a concert pianist, found that the painful paresthesias in the fingers of both her hands were so aggravated when playing the piano that she had to retire from the concert stage. A man with the condition may find it difficult to hold his pen for writing or



Fig. 3. Hands of a patient with bilateral median thenar neuritis. The atrophy of the small muscles of the thumbs is illustrated by the depressions in the thenar regions.

his razor for shaving. He may have difficulty making change. Young women employed as secretaries may find it difficult to write shorthand and to operate a typewriter because of the painful paresthesia or weakness of the thenar muscles or both.

The syndrome of median neuritis, as stated by Cannon and me in 1946⁽¹⁾, "consists of any one or all of the following signs and symptoms: paresthesia, pain, atrophy, sensory impairment, and muscle weakness." This syndrome must be differentiated from other conditions in which the hand or fingers or both are involved.

Protrusions of cervical disks⁽⁵⁾ may produce paresthesia in the fingers, but these lesions usually are associated with pain in the neck and limitation of motion of the cervical portion of the spinal column, and frequently with diminution or absence of the reflexes of the biceps or triceps muscle, depending on the nerve root which is involved.

The scalenus anticus syndrome, with or without cervical rib⁽⁶⁾, may cause even more confusion in a differential diagnosis. When the scalenus anticus muscle is at fault, vascular as well as neuritic symptoms may be expected and the nervous symptoms are likely to be rather diffuse in the involved upper extremity, although in rare cases they may be limited to the median distribution below the wrist. The pain usually is felt along the inner side of the arm, but may be felt over the distribution of the entire brachial plexus. Diminution or obliteration of the radial pulse on Adson's maneuver usually serves to differentiate the scalenus syndrome from median neuritis.

Two conditions in particular should not be confused with median neuritis because of the serious prognosis which they carry. These are progressive muscular atrophy and amyotrophic lateral sclerosis. In progressive muscular atrophy the intrinsic muscles of the hands and the muscles of the shoulder girdle are involved. Progressive weakness develops, and fasciculations of the muscles are seen. Although wasting of the thenar muscles occurs, there is also wasting of the hypothenar eminence and of the interosseous muscles, with resultant flattening of the hand. Eventually, wasting of the muscles becomes generalized, and the patient becomes bedridden, and finally dies of his disease. In amyotrophic lateral sclerosis (the disease that killed Lou Gehrig), the deep tendon reflexes are increased early in the presence of atrophy of muscles. This disease usually starts in the arms rather than in the hands. Disturbance of sensation is rare in this disease.

A careful, detailed neurologic examination is indicated in any case in which the diagnosis of median neuritis is in doubt. When the diagnosis is difficult, it may be necessary to exhaust most of the procedures available for differentiating lesions involving the nerve supply to the upper extremities. Roentgenograms of the cervical portion of the spinal column are useful, but hypertrophic changes and narrowing of intervertebral spaces in middle-aged persons, the group usually affected, are so common that extreme caution is necessary in interpreting the roentgenologic findings as etiologic factors in the production of the patient's symptoms. The majority of the patients with median neuritis whose cervical vertebrae were studied roentgenologically at the clinic were found to have varying degrees of hypertrophic changes with narrowing of one or more intervertebral spaces. One patient was shown to have symptomless cervical ribs.

Roentgenologic examination of the wrist and hand may be valuable, particularly if a history of injury to the wrist, such as Colles' fracture or fracture or dislocation of a carpal bone, is reported or arthritis is suspected. In some cases the roentgenograms reveal the diagnostic changes of rheumatoid arthritis or hypertrophic osteoarthritis. Median neuritis is not too uncommon in association with rheumatoid arthritis and

tenosynovitis of the flexor tendons of the fingers. The sedimentation rate of erythrocytes should be determined whenever arthritis or tenosynovitis is suspected.

X

Treatment

For early and mild tardy median neuritis an explanation of the phenomenon and reassurance to the patient may be all that is required. A splint to hold the hand in the position of rest is often useful if only one hand is involved, or splints may be used at night even if both hands are involved, and particularly if the painful sensations are principally nocturnal, as they may be. Some patients complain of loss of sleep because of exacerbation of pain at night. Some have more pain on flexion, some on extension of the wrist; therefore, the position of rest is best for the splinting. Often a change of occupation or the avoidance of those activities which aggravate the symptoms will give relief. In some cases in which rheumatoid arthritis or tenosynovitis is associated, injections of compound F into the wrist give relief. If arthritis is present, it should be treated.

If the condition is far advanced when first seen and recognized or if it progresses in spite of conservative therapy, the median nerve should be decompressed by dividing the transverse carpal ligament. Usually neurectomy is performed at the same time.

Surgical treatment

I prefer to do these operations with the aid of local analgesia. The patient may be prepared with barbiturates by mouth or twilight sleep (morphine sulfate and scopolamine hydrobromide) given hypodermically 45 minutes before the local infiltration is started. Brachial-plexus-block, general inhalation, or thiopental sodium anesthesia also may be used, but these methods of anesthesia carry a certain minimal risk that is not present with local infiltration.

A Z or S type of incision (fig. 1) is made at the wrist, and the tendon of the palmaris longus is identified. Immediately beneath this tendon the median nerve can be seen. While the median nerve and its branches are protected, the entire transverse carpal ligament is divided downward across its middle. If the surgeon keeps to the midline and stops when he has divided the distal

fibers of the ligament, he will not damage the median nerve nor the superficial palmar arch.

The exposed median nerve should be carefully inspected and if it shows signs of marked constriction or discoloration, neurolysis should be performed. This is effected by making with a razor blade two or three incisions in the epineurium parallel to the long axis of the nerve. This frees up the nerve fibers and facilitates recovery of nerve function.

The superficial fascia and skin are then closed with interrupted sutures and a dressing is applied to the wound. A splint to hold the hand in the position of rest for a few days is useful in promoting healing and avoiding pain in the wound.

When local analgesia is used, the patient is ambulatory the same day and out of the hospital as soon as he wishes. When both sides are operated on at the same time, it is better to keep the patient in the hospital for several days or until he can use his hands well enough to dress and undress himself and perform other necessary duties.

Analysis of Cases Treated Surgically from 1946 through 1954

Prior to January 1, 1946, Cannon and I⁽¹⁾ had studied the records of 38 patients seen at the Mayo Clinic with involvement of the median nerve beneath the transverse carpal ligament. Of those 38 patients, nine were treated by decompression of the involved median nerve. Four of the nine had a deformity of one type or another of the bones at the wrist. The condition of five of the nine was of the so-called spontaneous variety⁽⁷⁾.

As our knowledge of this condition increased and our surgical results proved how much relief could be given to patients suffering from acroparesthesia and painful hands, and to those having impaired function due to loss or impairment of sensation and muscle action, more patients were seen in neurosurgical consultation for consideration of decompression of the median nerve.

In reviewing the records of this large group of cases, I found that in many instances the situation was discussed with the patient and advice was given regarding the avoidance of those things which tended to

aggravate the symptoms; it was suggested that, if the condition progressed, decompression should be carried out. Some of these patients have gotten along satisfactorily; others have had the nerve decompressed.

Clinical data

In analyzing the records of 57 patients who have had decompression of one or both median nerves by division of the transverse carpal ligament at the clinic between January 1, 1946, and December 31, 1954, certain facts of importance stand out.

Forty-three of the patients were women, the oldest being 71 years of age at the time of operation and the youngest 27 years. The latter had injured the transverse carpal ligament some time previously with a piece of shattered glass. The youngest woman with spontaneous development of the syndrome was 42 years old. The average age for the women was 55.5 years.

Fourteen of the 57 patients were men. The oldest, 75 years old, gave no history of injury to the wrists before he underwent bilateral decompression and neurolysis of the median nerves for both motor and sensory loss in distribution below the transverse carpal ligament. The youngest man was 31 years of age. He also gave no history of injury and had no evidence of arthritis. Roentgenograms of the cervical vertebrae were normal. He obtained an excellent result when the median nerve was decompressed by division of the transverse carpal ligament. The average age of the men in this group was 54.0 years.

Of the 43 women in the group, 19 underwent bilateral decompression of the median nerves, whereas 5 of the 14 men underwent the bilateral procedure. Thus, less than 50 per cent of the patients in each group had the involvement to such a degree that it was deemed advisable to decompress the nerve on each side.

The records did not state whether 21 patients were right-handed, left-handed, or ambidextrous. However, there were 11 right-handed individuals who had the right median nerve decompressed, 17 who had both nerves decompressed, and 5 who had the left median nerve decompressed. One left-handed patient had his right nerve decompressed and one had both nerves decom-

Median neuritis

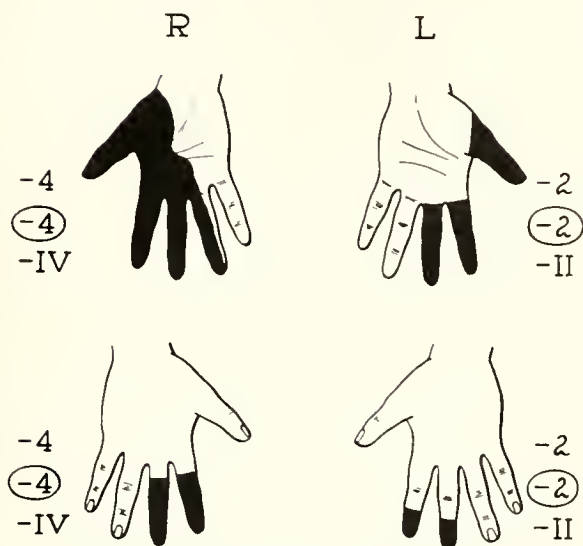


Fig. 4. The extent of sensory loss in the two hands of the patient who had bilateral median neuritis. Loss was greater on the right than on the left. Grading of the degree of sensory loss is on the basis of -1 to -4 (-1 being minimal and -4 being complete sensory loss). Sensation of touch is represented by Arabic numerals (given first), sensation of pain by encircled Arabic numerals, and temperature sensation by Roman numerals.

pressed. One ambidextrous individual had both transverse carpal ligaments divided to relieve the symptoms of median-nerve neuritis.

A search of the records of these patients was made for mention of a specific injury to the wrist that might have been responsible for the median neuritis. Such a history was obtained only four times among the men and five times among the women. The injury was usually a Colles fracture or injury to one of the carpal bones. Occupations which might have been contributory to the development of the neuritis were "very busy" secretarial work, milking of cows by hand, and tailoring.

The syndrome of median neuritis due to involvement of the nerve in the carpal tunnel may be purely sensory, purely motor or a combination of the two. On examination of such patients it is sometimes difficult, if not impossible, to prove objectively the loss of sensation or muscle power; yet to the experienced observer there may be no question concerning the exact diagnosis (fig. 4). In the 57 patients in this series, 40 presented both sensory and motor loss, whereas 8 had muscle weakness with or without atrophy of

the thenar eminence, and 6 had sensory loss only. Three patients failed to reveal objective sensory or motor loss.

Roentgen observations

Although the hands of all patients in this series were not subjected to roentgenographic examination, of those who were so examined 2 showed evidence of an old fracture of the carpal scaphoid, and 3 showed evidence of old fracture of the wrist, usually a Colles fracture. Seventeen patients had hypertrophic changes or evidence of osteoarthritis of the hands. Obviously, those who were most likely to show roentgenologic changes were subjected to this examination. Probably others who were not so examined might have shown some changes in the bones of the wrist or hands or both.

It is interesting that 43 of the 57 patients had roentgenographic examination of the cervical vertebrae, and 34 of these examinations revealed varying degrees of hypertrophic changes with narrowing of vertebral bodies or intervertebral spaces. One patient had symptomless cervical ribs. The other eight roentgenographic examinations showed normal conditions.

Lumbar puncture was carried out for diagnosis on only 2 of the 57 patients in this series at the Mayo Clinic. The spinal fluid was normal, without any disturbance of hydrodynamics as measured by the Queckenstedt test. The myelogram, made with ethyl iodophenylundecylate (Pantopaque), on one of these 2 also showed nothing abnormal.

Two of the patients had undergone bilateral anterior scalenotomy without success at the clinic before decompression of the median nerves at the wrist gave relief.

Surgical procedures

Operation on 21 of the 57 patients consisted of division of the transverse carpal ligament to relieve pressure on the constricted median nerve in the carpal tunnel. On 29 patients division of the ligament and neurolysis of the involved nerve were carried out. The neurolysis consisted of multiple longitudinal incisions in the epineurium to free the nerve fibers. In 7 cases, in addition to the decompression, the excess tissue was removed from the carpal tunnel. In 5 cases this consisted of the removal of inflammatory tissue about the tendon sheaths—that is, of the tenosynovitis. In one case a gang-

lion was excised, and in another a piece of bone was removed from the lower end of the radius to enlarge the channel for the constricted median nerve.

Since there were 43 women and only 14 men in this series, one must postulate some cause other than trauma as being responsible for the development of median neuritis in the hands. Even today, when women are doing many jobs formerly done principally by men, the preponderance of women affected does not seem to be explainable on a traumatic basis. Since the condition is occasionally encountered during pregnancy and clears at the termination of pregnancy, and since it is occasionally encountered in acromegaly and one such patient whose case was reported by Woltman⁽⁸⁾ improved after radiation therapy of the pituitary gland, one wonders if an endocrine or metabolic factor may play a role in some of these cases. Likewise, vascular changes must be considered, especially since acroparesthesia is common in thromboangiitis obliterans (Buerger's disease).

Results

The majority of the patients in this series were improved by decompression of one or both median nerves at the carpal tunnel. Some obtained complete relief of symptoms and signs. An occasional patient not only failed to improve but had a progression of symptoms later, usually due to arthritis.

Patients with marked loss of sensation or marked wasting of the thenar muscles usually failed to improve. This fact is recognized, and the only hope held out to such patients is that the progress of the disability may be halted. This is an important reason for advising operation in the presence of objective neurologic deficit, and particularly when progression of the disease is noted on repeated observation.

There was no surgical mortality.

Summary and Conclusions

Evidence based on the study and observation of a large series of cases is sufficient to warrant the statement that the median nerve or its branches is often constricted in the carpal tunnel, with resultant disability due to pain or to loss of motor function, sensory function, or both.

The condition occurs about three times as frequently in women as in men.

The diagnosis in most cases is easily established. The disability is limited to that part of the median nerve below the transverse carpal ligament. There may be a history of injury, but in the majority of cases the syndrome develops insidiously and spontaneously over a period of a few weeks to many years. It is important to differentiate this syndrome from others which carry a much graver prognosis.

When the condition is well developed, surgical treatment is required for relief. This consists of division of the transverse carpal ligament, with or without neurolysis of the median nerve. When the median neuritis is associated with tenosynovitis, dissection of the flexor tendon sheaths with removal of the inflammatory tissue is often needed.

The results of such treatment performed before irreparable damage occurs to the median nerve are good. In far-advanced cases, halting the progress of the disability is all that can be hoped for.

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Medical testimony: How many cases involving physicians as witnesses are tried in the courts of the United States every year no one can estimate. A few years ago Dr. Harry L. Kozol of Boston estimated that in a single year over 2,100 cases involving tort were tried either before a judge or a jury in the Massachusetts courts, many of these being automobile cases. It is his estimate that probably 90 per cent of these required the participation of physicians as expert witnesses and that a substantial number of them involved psychiatrists. If we add to these other types of litigation such as those involving commitment, wills, and criminal cases, the number is certainly a large one.—Winfred Overholser, *Medical Expert Testimony and Its Improvement*, *J. M. Soc. New Jersey*: 51:134, 1954.

THE USE OF CHLORPROMAZINE IN OCULAR SURGERY

BAXTER H. BYERLY, M.D.

ROBERT G. MURRAY, M.D.

FRANK C. WINTER, M.D.

and

M. M. VITOLS, M.D.

CHAPEL HILL

Chlorpromazine ("Thorazine" — Smith, Kline and French) was first synthesized in France in 1951, and became available for general use in the United States in May, 1954. The primary pharmacologic effect of the drug is a marked depressive action on the central nervous system. Secondarily, it also has a mild antispasmodic, antihistaminic, and adrenalytic activity. The action of Thorazine on the central nervous system has made it of extreme importance in psychiatry because of its remarkable effect on certain mental and emotional disturbances, and this effect, together with its marked anti-emetic property, accounts for its usefulness in general medicine and surgery. Since its introduction numerous reports have appeared on the use of Thorazine in various fields of surgery, including abdominal, thoracic and orthopedic surgery, fenestrations, tonsillectomies, Cesarean sections, gynecologic surgery, and obstetrics⁽¹⁾. This report deals with the use of Thorazine in ocular surgery.

Observation of psychotic patients at the State Hospital at Butner, North Carolina, suggested that restoration of vision by successful cataract surgery might be of great benefit by restoring the patient's contact with reality, promoting his independence and reducing the supervision and care required of the staff. Until the advent of Thorazine such surgery was not practical, because the agitated and unmanageable state of many of the patients made a turbulent and probably disastrous postoperative course seem likely. We decided to investigate the efficacy of Thorazine in ocular surgery and, as a separate project to be reported elsewhere, study the effect of restoration of vision on the psychiatric state of these patients. Accordingly, cataract surgery was performed on 22 psychotic patients, representing such varied conditions

as schizophrenia, involutional psychosis, affective psychosis, and the disturbed states. Thorazine was the *only* preoperative or postoperative medication used, and all operations were done under local anesthesia. All the patients were white; 7 were female and 15 male, and the average age was 75 years. For our purposes, the patients were classified preoperatively as agitated and restless or non-agitated. At operation the patients were classified as good and cooperative or poor and restless. Postoperatively, they were listed as being quiet and cooperative or poor and agitated (see table 2).

Technique and Dosage

The drug was given intramuscularly to all 22 psychotic patients, using 2 dose levels. The 11 patients in the high dosage group were given an initial preoperative dose of 25 mg. twice a day for two days, 50 mg. twice a day for four days, 100 mg. twice a day on the day of operation, and 50 mg. twice a day for one week postoperatively. The 11 patients in the low dosage group were given an initial preoperative dose of 25 mg. daily for two days, 50 mg. on the morning of operation and 25 mg. daily for four days postoperatively. No other preoperative or postoperative analgesia or sedation was used with the exception of one patient (C. P. No. 3707) who was given 75 mg. of Demrol at the time of operation.

All 22 patients received intracapsular cataract extractions, using accepted standard techniques, the majority by limbal base flap, with three pre-placed 6-0 chromic gut sutures. Fornix base flaps, limbal and posterior sections, and post-placed sutures were also used. Delivery of the lens was with erysiplake, capsule forceps, or lens loop. All sutures used were chromic gut, making it unnecessary to remove sutures later. Local anesthesia consisted of 1 per cent Novocaine for akinesia by the Van Lint and O'Brien methods; retrobulbar block with 2 per cent novocaine adrenalin; and local 2 per cent pontocaine in all 22 patients.

Results

Of the 11 patients who were given high dosages of Thorazine, 7 were classified as being agitated prior to Thorazine administration. All 7 were quiet and cooperative during surgery, and remained so postoperatively. Of the remaining 4 who were classified as cooperative prior to surgery, 3 were

From the Division of Ophthalmology, Department of Surgery, University of North Carolina School of Medicine, Chapel Hill, North Carolina.

Table 1
High Dosage Thorazine

Case	Number	Age	Sex	Race	Pre-operative Psychiatric Diagnosis	Pre-operative Behavior	Operative Behavior	Postoperative Behavior	Complications
BBS	3104	78	F	W	Schizophrenia	Agitated	Good	Good	None
SM	403	83	F	W	Manic Depressive	Agitated	Good	Good	None
BW	1182	80	F	W	Psychosis with cerebral arte- riosclerosis	Agitated	Good	Good	None
FMc	60	74	M	W	Dementia Precoc	Agitated	Good	Good	None
LLT	322	86	F	W	Schizophrenia- paranoid	Agitated	Good	Good	Died 3 months later of uremia and pneumonia
RJH	4562	79	M	W	Senile dementia	Agitated	Good	Good	Died 2 months later of toxemia and cachexia
CR	2661	89	M	W	Senile psycho- sis, presbyo- phrenic	Agitated	Good	Good	Died 2 months later of cardiac failure
MHJ	2229	85	F	W	Senile psycho- sis, paranoid	Non-agitated	Poor	Good	Vitreous loss during operation; Died 3 months later of cardio- vascular accident. Jaundice de- veloped 10 days after Thora- zine was discontinued.
DM	42	83	M	W	Schizophrenia	Non-agitated	Good	Good	None
PHW	2165	44	M	W	Schizophrenia- paranoid	Non-agitated	Good	Good	None. Marked improvement in psychiatric behavior
MM	4593	56	M	W	Schizophrenia- paranoid	Non-agitated	Good	Good	None. Marked improvement in psychiatric behavior

TOTAL 11. All did well at operation except one; all did well postoperatively; 4 deaths.

quiet and cooperative during surgery and all 4 were quiet and cooperative postoperatively. One patient who became restless and uncooperative during surgery, jerked his head and squeezed his eye, resulting in loss of vitreous (M. H. J., No. 2229, table 1). All 11 patients healed well, with good postoperative results.

Of the 11 patients who were given low dosages of Thorazine, 7 were classified as being agitated prior to Thorazine administration. Three of these did well at the time of operation and postoperatively while on Thorazine. Two were uncooperative and agitated during operation and postoperatively. Of these 2, 1 had a loss of vitreous when he suddenly raised his head immediately following the delivery of the lens before the sutures could be secured. The remaining 2 behaved poorly at the operative table, but were quiet and cooperative postoperatively. Of the 4 patients classified as non-agitated preoperatively, 3 did well during the operation and postoperatively; the fourth was poorly controlled at the operating table and difficult to manage postoperatively. All 11

of these patients however, healed with good results with one exception (J. W., No. 353), who 4 days after Thorazine had been discontinued, injured her eye under its shield, resulting in corneal abrasions and conjunctivitis which healed after further treatment (see table 2).

Of the 22 patients, 16 behaved well and 6 poorly at operation, with a loss of vitreous in 2 cases. Nineteen behaved well and 3 poorly, postoperatively. No postoperative complications were encountered as long as Thorazine was given (table 3).

Four of these patients have died during the past year, all of them two to three months postoperatively. The causes of death were pneumonia, cardiac failure, cachexia, and cerebral vascular accident. None of the deaths could be attributed to Thorazine on clinical grounds, but one of the patients developed jaundice 10 days after Thorazine was discontinued, and this condition persisted until death from cerebral vascular accident. Permission for autopsy was refused in all 4 cases.

Table 2
Low Dosage Thorazine

Case	Number	Age	Sex	Race	Pre-operative Psychiatric Diagnosis	Preoperative Behavior	Operative Behavior	Postoperative Behavior	Complications
CAP	3707	72	F	W	Schizophrenia	Agitated	Good	Good	None
JW	353	82	F	W	Dementia Praecox	Agitated	Poor	Good	4 days after Thorazine discontinued patient stuffed paper under shield resulting in corneal abrasions.
RSB	666	75	M	W	General para- lysis of insane	Agitated	Poor	Poor	None
HAMcB	651	67	M	W	General para- lysis of insane	Agitated	Good	Good	None
RET	2528	84	M	W	Senile psychosis	Agitated	Good	Good	None
IRH	5188	76	M	W	Psychosis with cerebral arte- riosclerosis	Agitated	Poor	Poor	None
DAC	516	82	M	W	Involuntional melancholia	Agitated	Poor	Good	Vitreous loss, otherwise none
IG	1154	69	M	W	Dementia Praecox	Non-agitated	Good	Good	None
JHR	65	69	M	W	Schizophrenia	Non-agitated	Good	Good	None
GCP	502	71	M	W	Korsakoff's psychosis	Non-agitated	Good	Good	None
FP	62	72	M	W	Dementia Praecox	Non-agitated	Poor	Poor	None

TOTAL 11. Five did poorly at operation; 3 did poorly after operation.

Supplemental Experience

Thorazine has also been administered to 23 other surgical patients at North Carolina Memorial Hospital. The procedures have included cataracts, glaucoma, enucleation, retinal detachment, scleral resection, and plastic repair. The patients have varied in age from 13 to 65 years, and include both sexes, as well as white and Negro patients. In the majority of cases Thorazine was used in conjunction with routine sedation and analgesia normally employed in oc-

ular surgery performed under local anesthesia. The dosage has also been varied and has been given both orally and intramuscularly. We have found the oral route preferable to intramuscular administration except in nauseated or highly uncooperative patients.

While our experience with the psychotic patients indicated that rather large doses (100 to 200 mg. daily) were necessary to control the severely disturbed and agitated patients, we have found a much smaller amount effective in the usual cooperative and well-oriented individual. We now feel that under ordinary circumstances, oral doses of 25 mg. on the night before surgery and 25 mg. on the morning of surgery are ample to control anxiety and assure a tranquil patient on the operative table. This amount also appears effective in the prevention of emesis, and seems to potentiate the action of the routine sedatives and analgesics. In senile or debilitated patients and in those with liver diseases where detoxification of barbituates may be defective, we have found it possible to omit preoperative sedation with barbituates entirely. To help

Table 3
Influence of Thorazine on Behavior

Preopera- tive Behavior	Behavior During Operation		Post- operative Behavior	
Agitated	Good	Poor	Good	Poor
14	10	4	12	2
		Loss of vitre- ous in 1 case		
Non- agitated	Good	Poor	Good	Poor
8	6	2	7	1
		Loss of vitre- ous in 1 case		
Total				
22	16	6	19	3

Table 4
Influence of Thorazine on Surgical Course

Uncomplicated	Operative Complications	Postoperative Complications
20	2	0

prevent postoperative confusion in senile patients, we have found a third oral dose of 25 mg. six to eight hours after surgery to be helpful.

Complications

At the higher dose level used in our psychotic patients, 1 case of jaundice was seen after Thorazine was stopped. Other cases of Thorazine jaundice reported in the literature have all occurred while the patients were being given the drug⁽²⁾, and we have no way of knowing whether jaundice in this case was due to Thorazine or not. None of our high-dosage cases became hypotensive to a degree that would cause clinical concern. One of our supplemental patients who received 50 mg. preoperatively became hypotensive postoperatively, but the blood pressure returned to normal in two hours without medication. We have not observed agranulocytosis or leukopenia or drug allergy.

Summary and Conclusions

1. The use of Thorazine in ocular surgery has been studied in 22 psychotic and 23 non-psychotic patients who have undergone major ocular surgery.

2. Preoperatively Thorazine was found to calm and relax the patient, reduce anxiety and apprehension, and lessen the amount of sedation and analgesia required.

3. During the operation the drug lessened the restlessness, controlled vomiting, and enhanced anesthesia.

4. Postoperatively, in conjunction with small doses of analgesics or sedatives, it relieved pain and controlled nausea, vomiting, hic-coughs and postoperative confusion.

5. Used in small doses of 25 to 75 mg. daily for short periods of 24 to 48 hours, it was essentially free of toxicity and was a highly effective and desirable adjunct to ocular surgery.

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THE COMMON-SENSE MANAGEMENT OF ATOPIC ECZEMA

SHERWOOD W. BAREFOOT, M.D.

GREENSBORO

The successful treatment of atopic eczema (neurodermatitis disseminata) is always a difficult problem. Local dermatologic therapy is essentially symptomatic. Any rewarding therapeutic regimen in individuals suffering from this affection, who are old enough to be subject to psychosomatic influences, must be directed towards personality and emotional adjustments. Certainly, here the practice of the art as well as the science of medicine finds its Utopia.

Those best qualified to advise and guide profound and dynamic changes in an individual's life are those known best and respected most by him. In this instance the family physician, with moral support from the dermatologist, most nearly qualifies. Recognition of these facts prompts the present discussion.

Guy and his co-workers⁽¹⁾ have described successful group psychotherapy for atopic eczema. In a large clinic this method would seem to be practical. It enables people with a common problem to take encouragement from the progress of another, to try to learn from him, and to endeavor to do as well or better than he. This method is proving highly successful in therapy for alcoholics. Most of us, however, must consider and deal with our patients as individuals.

O'Leary⁽²⁾ is not alone in his opinion that the psychogenic concept does not adequately explain the cause of atopy. No claim is being made to the contrary, but it is certainly true that patients with atopic eczema have an abnormal skin which is unduly influenced by psychogenic factors.

Patients with atopic eczema usually exhibit an abnormal vasoconstricting reaction in the skin. Eyster⁽³⁾ and Weber⁽⁴⁾ and their colleagues have observed that these patients exhibit swifter cooling than do normal persons in cool environment and delayed warm-

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Table 1

Types and Characteristics of Atopic Personalities

Hyperemotional Dependents	Psychopathic Introverts
1. Physically hyperactive	1. Gives impression of being lazy
2. Mentally alert	2. Sluggish mentally
3. Friendly	3. Hostile
4. Appreciative	4. Sarcastic and suspicious
5. Extrovert, except for apprehension about self	5. Self centered
6. Unable to make decisions and stand by them. Easily discouraged	6. Stubborn and impatient in ideas and decisions
7. Flighty	7. Reluctant to change ideas or decisions
8. Fastidious	8. Careless and intemperate
9. Sleeps poorly	9. Sleeps poorly

ing in a warm environment. There is a hyperreactive response of the blood pressure to the cold pressor test. Stroking the affected skin of a patient with atopic eczema with a tongue blade or fingernail, usually leaves a line of "white dermatographism" which persists for several minutes, rather than the red line seen in normal skin. Thus various stimuli such as fear and apprehension, which produce vasoconstriction in normal persons, may produce an intensified response in a person with atopic dermatitis and be significant in the etiology.

Hill⁽⁵⁾ feels that atopic dermatitis is probably the same disease in the infant, child, and adult despite morphologic variations due to aging.

Probably all of us have seen infants with atopic dermatitis in whom egg white would cause the skin to flare-up. One seldom sees an atopic skin exacerbation produced by an enteral or parenteral allergen in a child past the age of 4 years, however, though a flare-up frequently follows emotional crises in older patients with the disease.

Probably about one-third of the infants with atopic dermatitis are permanently well by the age of 5 years. A patient past the age of 4 years with severe, persisting atopic dermatitis is rarely seen, unless the condition has previously been neglected or inadequately treated, or unless there has been a bad emotional environment. Possibly by the time this age is reached, allergens as such have become relatively impotent dermal trouble-makers; but in the two-thirds with persisting atopic eczema, the skin continues to react as before to influences mediated through neural components as expressions of emotional imbalance.

Rothman and Walker⁽⁶⁾ feel that the role played by emotions is to lower the threshold

for itching, which effect in turn leads to excessive rubbing and scratching, and that the resultant trauma is responsible for many of the elements of the eruption. Cormia⁽⁷⁾ considers the basic disturbance to be psychosomatic, with this condition creating a susceptibility to allergic dermatoses.

Personality Types

Scientific evaluations of the personality and emotional factors in such patients may be found in writings such as those by Fiske and Obermeyer⁽⁸⁾, McLaughlin and co-workers⁽⁹⁾, and Brandt⁽¹⁰⁾. My feeling is that these patients fall into two categories, based on personal observation rather than exact psychiatric nomenclature.

Hyperemotional dependents

Patients in this category are extremely lovable persons. From the physician's first contact with them, they tell him what a wonderful doctor he is. Should he be among the first to be consulted, he should not feel discouraged if they do not return. The physician may be "the most wonderful doctor in the world" when they leave his office; but the chances are, they won't go far before meeting someone who knows of a "sure cure"; and because of their hyperemotional dependency, it isn't difficult to persuade them to try it. If these patients can be taught some degree of self dependency and the physician can gain their confidence to the extent that they will not be moving from one doctor and one "cure" to another, a great deal can be done to help them.

In addition to being hyperemotional, they are apprehensive about themselves, hyperactive, friendly, easily discouraged, highly imaginative, fastidious, excitable, flighty and usually sleep poorly (table 1).

Table 2
Treatment Aims in Atopic Dermatitis

Hyperemotional Dependents

To gain confidence in self and learn to maintain lower emotional level. (These patients can be taught).

Psychopathic Introverts

To create a desire to learn and redirect emotions into less violent channels. (Don't waste effort trying to teach. Endeavor to develop dependency in a good counselor and then redirect emotions.)

Psychopathic introverts

While in the army, a friend told me of a simple method for detecting a psychopathic personality: "When a fellow makes you mad as hell when you are trying to talk to him in a sensible manner, write on his chart that he has a psychopathic personality." I have found this system to be fairly accurate.

I have found that these patients are usually somewhat depressed, explosive, selfish, suspicious, difficult to reason with, hostile, indifferent, sarcastic, and impatient. They anger easily, do not conceal displeasure, are difficult to impress, are intemperate in their habits, and sleep poorly. The possibility of helping them is almost hopeless, unless their confidence can be gained and they can learn to accept some dependence and help in getting started on the road to improvement.

The prominent personality characteristics and differences in these two emotional types are given in table 1, and the treatment aims are summarized in table 2.

Management

Diet

Most patients with atopic eczema are, from the outset, concerned about the foods which they may and may not eat. They are told that, with the exception of chocolate, they may eat any food which there is no reason to suspect. Clinical experience has shown that most atopic patients do not tolerate chocolate well.

If the patient is suspicious of a given food, he is asked to try the food from time to time after several days of abstinence. If no reaction occurs, he is usually convinced that a particular food does not aggravate his skin.

I tell my patients that if cucumbers cause indigestion, they do not need a skin test to tell them that they shouldn't eat cucumbers. Similarly, if a given food aggravates the skin, we can easily determine the fact by repeated trial tests.

If the onset of eczema occurs when an infant is but a few weeks old, and at a time when the diet consists solely of cow's milk and perhaps vitamins and orange juice, my routine practice is to substitute goat's milk or a milk substitute and synthetic vitamins, including vitamin C, in aqueous solution rather than in natural oils. This regimen is discarded if some improvement is not seen within three weeks. I have never found skin tests to allergens in patients with atopic eczema to be helpful, and hence have discarded them. I agree with Peshkin⁽¹¹⁾ that "often the offending food has to be determined by test diets when the skin tests are negative." The same is true when the tests are positive.

Local and Systemic Therapy

Local and systemic medications are helpful in indirectly accomplishing improvement in the emotional life of an individual with atopic eczema. Local and systemic medications for atopic eczema are essentially the same for infants, children, and adults.

Local therapy

Locally the first efforts should be directed towards clearing up secondary infection. Wet compresses are frequently indicated. Usually almost any local antibiotic preparation will be effective. Systemic preparations are preferably avoided because of the risk of subsequent sensitivity reactions. In severe cases, systemic antibiotic or chemotherapeutic drugs may be needed.

The discontinuance of soap for bathing is advised. Soapless detergent cleansers, of which there are several available, are substituted. A 50 per cent emulsion of irradiated colloidal crude coal tar* in the bath water may be used. The amount varies from 1 teaspoonful to a baby's bath water, to 2 tablespoonfuls for a tub of water for an adult. It is recommended that the patient submerge his body in this solution for 45 minutes before retiring.

*Zetar Emulsion, Dermik Pharmacal Co., Inc.

Table 3

Suggested Dosages of Chloral Hydrate-Elixir of Benadryl Mixture
For Various Age Groups

Age in years:	(All doses are two teaspoonfuls) Ratio of parts of 10% aqueous solution of chloral hydrate to parts of Elixir of Benadryl:	Intervals:
1 - 4	1:3	q. 8 h.
5 - 8	1:3	q. 6 h.
9 - 12	1:2	q. 8 h.
13 - 16 (and all adults weighing 120 lbs. and more)	1:2	q. 6 h.
16 and over (persons weighing 120 lbs. and more)	1:1	q. 6 h.

For itching, any soothing lotion or cream of a low sensitizing index may be used as necessary.

Steroids have a definite place in local therapy, although their efficacy has varied in different hands^(12,13,14). Cortisone acetate applied locally is generally ineffective except for the eyes and possibly in the ano-genital, palpebral, labial, and perioral regions. Hydrocortisone acetate, topically applied in strength of 1 per cent to not more than 1/8 of the body surface for as long as eight months is apparently effective and free of the undesirable effects associated with the systemic administration of this group of hormones⁽¹⁵⁾. Admittedly, if the hydrocortisone is discontinued as soon as the dermatitis appears to have subsided, the eruption may recur. The preparation actually *controls* rather than *cures* the dermatosis. Since, however *control* of atopic dermatitis for a sufficiently long period is about as close an approximation of a *cure* as exists, there is no actual contraindication to its judicious use over relatively long periods with the foregoing recommendations in mind. Certainly, there are no other local medicaments which will *cure*, and probably none which will so consistently effect *control*.

Systemic therapy

Systemic steroid therapy has its place in the treatment of atopic dermatitis. Reporting some of the first cases of this condition to be so treated, Kierland and others⁽¹⁶⁾ suggested that there is the "tendency to become dependent on the hormone; accordingly, it is suggested that the treatment be reserved for patients with intractable symptoms and that the courses of treatment be of short duration." Immediately following this article, in the same issue of the same journal, was a report on the untoward psychologic

responses to steroid substances⁽¹⁷⁾. These precautions are still appropriate today. One should try to avoid systemic steroid therapy in patients inclined towards easy addiction and then use it only in severe cases long enough to "put out the fire." Subsequent control can usually be maintained with local hydrocortisone therapy and other measures.

Much has been said about the "tranquilizing" effects of reserpine⁽¹⁸⁾ and chlorpromazine⁽¹⁹⁾ in the treatment of dermatoses thought to involve psychogenic factors. Certainly such calming effects are desirable in atopic eczema.

I have used these drugs fairly extensively, however, and feel that much better "tranquilizing" effects have been obtained by mixtures of chloral hydrate and elixir of diphenhydramine hydrochloride (Benadryl). These two agents seem to be definitely synergistic. The combination greatly minimizes pruritus, and affords a degree of "tranquility" with a minimal amount of drowsiness as long as the patient is physically active.

A dosage schedule based on experience with different age groups (assuming weight for age is within normal range) is suggested in table 3. Infants under 1 year of age may be given the 1:3 mixture, measured in drops, remembering that about 2 mg. of diphenhydramine hydrochloride for each pound of body weight should be given daily, and that there are approximately 2 mg. in each cubic centimeter of the elixir. Some adults may require as much as 1 tablespoonful (15 cc.) every 6 hours in order to obtain the desired result.

Emotional Orientation and Redirection

From the outset we should emphasize to these patients that we are attempting to help them with adjustment of emotions, *not* treating them for "psychiatric disturb-

ances." They should be told that their emotions are no more violent than their neighbors or friends, but that because their skins react violently to emotional stimuli, the "speed limit must be observed." I frequently use such expressions as "living a day at a time" and "Rome wasn't built in a day." A thought-provoking axiom is: "If you have one eye on yesterday and the other on tomorrow, you certainly will be looking cock-eyed at today."

Efforts to influence the emotions of children vary with the age, mental development, and emotional level of the child. In dealing with young children, I try to influence the parental emotions directed towards the child with the hope that the efforts will be echoed in the emotional level of the child. Certainly, undue apprehension on the part of parents is reflected in the emotions of a child.

After talking along these lines, the physician may stroke with a blunt instrument the skin of the patient and then his own, comparing the resultant white dermographism on the patient's skin with the red streak on his own. He explains that the small blood vessels in the skin normally dilate to such stimulation, but that the patient's react abnormally by constricting. The patient is told that the capillaries in his skin react violently when they would normally be expected to constrict only slightly or even dilate. It is explained then that when this vasoconstricting process is repeated numerous times daily, it interferes with the nutrition of the skin, which becomes unhealthy.

I have found patients interested in these elementary explanations of skin physiology. I encourage them to ask questions and attempt to give simple answers. Our next efforts are directed towards enabling the patient to develop self confidence, remembering that the psychopathic introvert must first learn to accept some dependency on the physician. If the latter aim can be accomplished, the patient can be prevented from listening to everyone's advice and running from pillar to post in search of a cure.

We usually are successful in being able to *teach* these ideas to patients who are hyperemotional dependents, but usually must content ourselves with trying to help the psychopathic introvert *learn* them (table 2). The psychopathic introverts are almost hopeless unless the physician is moderately successful in making the patient feel some

actual dependency upon him. If decisions are made by the patient, the results are usually catastrophic. If he is willing to allow a capable person to supervise his thinking until the course has been charted, he may get a good start and eventually reach the envisioned destination. He may *learn* with encouragement but cannot be *taught*.

Illustrative Cases

The following case history of a 55 year old widow with a hyperemotional dependent personality shows what can be accomplished with such a patient. Perhaps this was done by chance, but sometimes it is through effort. The case also illustrates the importance of the physician's having the patient's complete confidence.

The patient's husband had died suddenly with a "heart attack" two and one-half years previously. She felt that her two grown children had resented their father's unexpected death and thought that she had not done all possible to save his life. At that time her eczema had become very severe after having been quiescent for many years. She had not been helped by two dermatologists near her home in Minnesota nor two in North Carolina.

She came to see me while on a prolonged visit with a daughter in North Carolina. She disliked visiting the daughter and wanted to be alone at her home in Minnesota.

She was under my continuous care for six months. In spite of two periods of hospitalization lasting several weeks, she did not improve.

Finally, she told me that she felt certain that if she went to the Mayo Clinic, where she had been several times previously and which was near her home, she would get well. Until then the patient had been completely dependent upon others to make all her decisions for her. I thought that this decision indicated some evidence of self-confidence and encouraged her to go.

At the Mayo Clinic, she was under the care of a physician who gained her complete confidence and apparently made exactly the right approach to her problem. He wrote me that he had "talked with her at length about the nature of neurodermatitis and its implications." A letter from the patient to me, quoted in part below, described the results and possibly the importance of the "implications" which the doctor mentioned.

"They used wet packs of aluminum subacetate solution for several days on my arms, legs, and neck which seemed to have started the healing; then calamine lotion and Ichthyol ointment, Benadryl capsules for itching, and chloral hydrate for sleeping. You had done all these things while I was in Greensboro, but they seemed to do the work this time. I was out in a week, all cleared up. Doctors were amazed at my quick recovery. However, there were several other patients with exactly the same thing who weren't doing so well."

The conversion of this patient from an apathetic confused individual to one who actually and sincerely wanted to be helped was a satisfactory reward for all the efforts expended in her behalf. Then, she was fortunate enough to find a physician who was able to gain her complete confidence and to help her accomplish a complete dermato-emotional rehabilitation.

Another patient comes to mind who, though still having occasional mild episodes of atopic eczema after 10 years, I consider to be among the most satisfactorily emotionally readjusted persons that I have seen. Completely disabled 10 years ago, she now lives a normal life. The most striking change has been the development of self-confidence. Ten years ago she was unable to make a decision about anything. She knows now that her affliction is not something for "the doctor to cure"—that she, too, is in the battle. When she speaks of her treatment she doesn't say "the doctor" decided to do this, but "we" did or "we" are doing.

Finally, every atopic patient, like the alcoholic, is never *cured* but merely *controlled*. In the same sense that he must have an understanding of his problem, he must have hope. It is paramount that the physician always keep these thoughts uppermost when dealing with atopic patients.

Summary and Conclusions

1. Patients with atopic eczema usually exhibit demonstrable abnormal vasoconstricting reactions in the skin.

2. Two personality types in patients with atopic eczema have been observed. One has been classified as the *hyperemotional dependent* and the other as the *psychopathic introvert*.

3. Local and systemic medications, including steroids, are adjuncts to the emotional redirection of patients with atopic eczema.

4. Skin tests to various allergens have not been helpful in my experience.

5. Mixtures of chloral hydrate and Elixir of Benadryl, in proportions varying with the age of the patient, are helpful in allaying pruritus and "tranquilizing" the patient during efforts toward emotional redirection.

6. The *hyperemotional dependent* needs to be taught self-confidence and assurance.

7. Helping the *psychopathic introvert* to see the need for some degree of emotional dependency is the first step towards his emotional rehabilitation. Efforts should be made towards encouraging these patients to *learn* rather than trying to *teach* them.

8. The physician who gains the confidence of these patients should assume the obligation of helping them understand the nature of their disease and of assisting in the development of an appropriate emotional personality.

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"Does It Work?"

... when we consider a line of treatment we start with the question "Should it work?" and finish with the question "Does it work?" Too many treatments are still advocated merely because there is a theoretical reason why they should work and without a practical controlled test being done to see whether they do work. For instance, because creatine excretion is increased in muscular dystrophy and glycine by mouth increases the supply of creatine to the body, the administration of glycine to sufferers from muscular dystrophy was advocated for a good many years without any convincing evidence that it was effective.—Asher, R.: *Straight and Crooked Thinking in Medicine*, *Brit. M.J.* 2:460 (Aug.) 1954.

Are we not prone to accept a drug as effective in treatment because it ought to work rather than because it does work? Undoubtedly we are. Is there not a tendency to be convinced that because a drug reduces gastric acidity it does heal gastric ulcers, that because a drug increases cardiac output it benefits cases of heart failure, or that because a drug kills micro-organisms in a Petri dish it will kill them just as well in a living patient? The theoretical and laboratory tests for the effects of treatment are an essential part of clinical research and are responsible for many brilliant advances in therapeutics, and doctors must be on guard against being converted too readily to a line of treatment by theoretical arguments until these are supported by practical clinical tests.—Asher, R.: *Straight and Crooked Thinking in Medicine*, *Brit. M.J.* 2:460 (Aug.) 1954.

DIVISION OF HEALTH AFFAIRS

*Report of the Administrator,
University of North Carolina
1954-1955*

HENRY T. CLARK, JR., M.D.
CHAPEL HILL

When 16 members of the first graduating class of the School of Nursing were given their diplomas by Chancellor R. B. House on June 6, 1955, the occasion marked the completion of one full cycle of all the basic teaching programs of the Division of Health Affairs at the University of North Carolina.

At the same commencement, 59 medical students were awarded M.D. degrees in the second graduation exercises of the new four-year School of Medicine; 39 dental students were given D.D.S. degrees in the second graduating class of the new School of Dentistry; 58 students were graduated with M.P.H. or other appropriate degrees or certificates from the School of Public Health; and 41 students were awarded B.S. in Pharmacy degrees by the School of Pharmacy. Furthermore, 11 certificates were awarded in Dental Hygiene to members of the first graduating class in that program.

The year 1954-1955 witnessed substantial growth and maturing of the six-year old Division of Health Affairs. During this six-year period, a \$14,000,000 capital expansion program has been carried out. New faculties have been assembled, new curricula planned, and new teaching programs launched in clinical medicine, dentistry, and nursing. Existing programs in the field of public health and pharmacy have been expanded and strengthened. Large-scale research programs have been started throughout the Division. And major service programs, located primarily in the North Carolina Memorial Hospital (including the Psychiatric Center) and in the School of Dentistry clinics, have been activated. The following is a brief picture of recent and current activity in the Division of Health Affairs.

North Carolina Memorial Hospital

At year end 1954-1955, the North Carolina Memorial Hospital, the general teaching hospital of the Health Center, had 273 of its capacity of 408 beds in use. Located in a town and a county which did not have a community hospital prior to its opening on September 2, 1952, the North Carolina

Memorial Hospital has steadily increased its services during its relatively short period of active operations. During 1954-1955, its average daily bed census was 182 (excluding newborn) and its average monthly outpatient visit rate was 4,340.

Though serving in part as a community hospital for Chapel Hill and Orange County, during a recent typical month the hospital had bed patients from 70 of the 100 North Carolina counties. It is worthy of note that 71 per cent of bed days of care during 1954-1955 were rendered to staff or "ward" patients who could pay only a part of their costs, and in many instances little or nothing. A substantial state appropriation is necessary (\$942,000 during 1954-1955) to cover the gap between collections from patients and the costs of services rendered.

It is, furthermore, the feeling of a large segment of the clinical staff who have come to North Carolina from many other medical centers that, on the average, the patients entering the North Carolina Memorial Hospital are more complex and generally "sicker" than those with whom they had experience in their former locations. This makes for a higher than average operating cost, but at the same time it dramatizes the service which Memorial Hospital is rendering to the people of North Carolina and to the physicians and community hospitals from which the patients are referred. The teaching staffs report that, except in a few very specialized areas, the present number and variety of patients provide satisfactory clinical material for current teaching programs.

The Psychiatric Center

An event of major significance occurred on January 11, 1955, with the opening of the Psychiatric Center of the North Carolina Memorial Hospital. Constructed with approximately \$1,000,000 in state funds, which were appropriated originally to the North Carolina Hospitals Board of Control but transferred by that Board to the University, the Psychiatric Center contains 72 beds, appropriate facilities for outpatients and some undeveloped space which is planned for research activity. At the time of its opening, 36 beds were made available, half in an "open" and half in a "closed" ward. These facilities have been used to capacity, and there has been a waiting list of patients seeking admission since the

opening day. In addition, there have been 934 visits to the psychiatric outpatient clinic per month since the center was activated. Further bed activation is planned for the early fall of 1955. Of the bed days of care rendered to date, some 59 per cent have been rendered to staff or "ward" patients.

The Psychiatric Center is physically a wing of the North Carolina Memorial Hospital, and administratively it is operated as one unit of the total hospital facility. It does, however, have a separate budget and a separate state appropriation.

It should be noted that a warm, effective working relationship exists between leaders of the Department of Psychiatry and related University fields, on the one hand, and leaders in the mental hospitals of the State, on the other. Appropriate committees have been at work planning joint residency programs and joint research activity. It would appear that the dreams of North Carolina mental hospital leaders of a few years ago—for home-grown psychiatrists, psychiatric nurses, psychiatric social workers, and clinical psychologists—to fill key positions in the mental hospital system of the state will soon become a reality through growing University of North Carolina programs in these areas.

Gravely Sanatorium

In a parallel field, the Gravely Sanatorium completed its first full year of operation in 1954-1955. Located in the Health Affairs complex and, in fact, connected to the North Carolina Memorial Hospital by tunnel, this 99-bed sanatorium is administratively a part of the North Carolina Sanatorium system, but, in keeping with joint University-Sanatorium agreements, the professional care to patients is provided primarily by members of the School of Medicine faculty. The resources of the Gravely Sanatorium are available for the teaching of medical, nursing and other Health Affairs students, and there is a close integration of research programs. The beds of the sanatorium have been used essentially to capacity since the early days after it was opened.

The School of Medicine

For the School of Medicine, 1954-1955 represented the second year in which instruction for four classes of students has been provided. During this year the faculty continued to grow, with most of the posi-

tions provided in the budget being filled. Altogether, 20 new full-time appointments were made. Faculty additions in pediatrics and psychiatry were perhaps the most important, since these departments were seriously understaffed during early months of clinical operation.

Furthermore, there was a growing sense of stabilization of all activities—particularly in the organization of teaching, research, and patient-care programs—among undergraduate students, house staff and faculty. In addition, there was commendable progress in research activities and in the continuation education program.

The medical student body numbered 241 during 1954-1955, with a new high of 66 students being admitted as freshmen in September, 1954. The medical faculty likewise were responsible for the instruction and clinical supervision of 90 interns, residents, fellows, and trainees during this year. Also, some 1,200 students from the other units of Health Affairs and the University at large received a part of their instruction from this faculty.

In the field of research, the investigations under way and the publications resulting from previous activities in this field were commendable in scope, quality, and number. In addition, significant teaching grants were in effect, among the most important of which were awards from the Commonwealth Fund to support the General Clinic, from the National Foundation for Infantile Paralysis for a special teaching and demonstration program in rehabilitation, and from the U. S. Public Health Service and the National Institutes of Health to support special teaching programs in cancer, cardiology, neurology, and psychiatry. Altogether, special grants for teaching programs during 1954-1955 totaled \$236,000, grants for research projects totaled \$340,000, and other grants for scholarships and related purposes totaled \$38,000.

Regarding the most pressing needs of the School of Medicine, additional staff is essential if expanding teaching and patient care programs are to be maintained at the present high level of quality and if the research potential in the faculty is to be fully developed. Furthermore, there are urgent needs for research laboratories and office space for staff, facilities for rehabilitation services, facilities for private ambulatory patients, overnight housing for ambulatory



Fig. 1. Here is shown the physical layout of the Division of Health Affairs as it appeared in September, 1955. The main features are: (1) two women dormitories for student nurses; (2) a dormitory for the intern and resident staff; (3) the main office and classroom building of the School of Nursing; (4) The Psychiatric Center; (5) the Gravelly Sanatorium; (6) the main unit of the North Carolina Memorial Hospital; (7) the UNC student infirmary topped by two obstetric wards; (8) the main outpatient department and cancer research facilities; (9) the main School of Medicine and Public Health building; (10) the School of Dentistry; (11) the Chapel Hill-Pittsboro Highway; (12) one wing of a future School of Public Health building, and (13) the location of the future School of Pharmacy building.

patients and their families, and dormitory space for students. And, in addition, funds are required to develop further extension programs for practicing physicians and to provide more scholarships and fellowships for students and young physicians.

The School of Nursing

The School of Nursing has as its basic program a four-year course of study leading to the B.S. in Nursing degree. Students enter as freshmen at the September opening of the University and, with the addition of two full summer terms, are graduated with their regular college class four years later. Though the first graduating class in June, 1955, contained only 16 students, future graduating classes will be much larger. Sixty-four freshmen and six students with advanced standing were admitted in September, 1954, and a freshman class of 65 for September, 1955, was filled by May. During 1955-1956 the student body will number approximately 185, and existing physical facilities for the School of Nursing will be almost completely in use. Of major importance in producing this increase in student enrollment has been scholarship assistance provided in large part through the work of the Nursing Committee of the Medical Foundation of North Carolina.

Plans were completed during 1954-1955 for the inauguration in September, 1955, of a new curriculum leading to the degree of Master of Science in Nursing. The first graduate program will concentrate on nursing service administration, but it is expected that advanced training in psychiatric nursing will be started in September, 1956. This program of advanced training is being supported in large part by a five-year grant from the Kellogg Foundation, with special scholarship money being available through a grant from the Commonwealth Fund.

A four-year research study of how best to incorporate needed aspects of the social and psychiatric sciences in the undergraduate curriculum was launched during 1954-1955, and has required considerable faculty attention. This project is supported by a grant from the U. S. Public Health Service.

The School of Public Health

The School of Public Health is made up of 12 departments. Eight of these are, in a sense, "schools" within themselves, having students specializing in their particular dis-

ciplines of public health. These special departments are: Public Health Administration, Biostatistics, Health Education, Maternal and Child Health, Public Health Nursing, Nutrition, Parasitology, and Sanitary Engineering. Students in these departments, of course, take other Public Health "core" subjects. Departments which did not have student majors during 1954-1955 were Epidemiology, Mental Health, Field Training, and Experimental Medicine.

The School of Public Health is a regional and, to a considerable degree, an international school, drawing its students from many states and countries, though the largest single group is from North Carolina. This is in the tradition of its origin as a facility which was largely activated by federal funds to train public servants. It is worthy of note in this connection that of its total operating budget of \$678,000 for 1954-1955 (covering teaching, research, and special project activity), \$422,000 came from special grants and other sources apart from state budgets.

During 1954-1955, there were 92 full-time students enrolled in the school, a drop of about 20 per cent from the previous year (due probably to reductions in training budgets at the state levels caused by reduced federal grants). In addition, several hundred students were given short courses or other instructions in the school. Present indications are that enrollment will rise during 1955-1956.

Apart from regular teaching, the activities of the School of Public Health faculty continued to be many and varied in the fields of research, field consultation, and special service. Of particular interest in the last area, studies of health conditions in Peru during 1954 resulted in a three-year contract with the Foreign Office Administration and the National School of Engineering in Lima, Peru, for the teaching of sanitary engineering in that program. Work is now in progress in this connection.

A continuing urgent need in the School of Public Health is for an adequate building to house its present scattered departments. There is a parallel need by the School of Medicine to take over the space which would be released on the ground floor of the Medicine and Public Health Building.

The School of Dentistry

The School of Dentistry continued to ex-

pand its activities during 1954-1955, with the completion in September, 1954, of graduate and postgraduate facilities on the third floor of the clinic building, the inauguration of new graduate programs in oral surgery and pedodontics, the rounding out of the dental hygiene program, and the rapid expansion of the dental assistants correspondence course, with 125 enrollees, in the spring of 1955. The residence enrollment during 1954-1955 totaled 181 regular dental students, 5 graduate students in the fields cited, and 31 dental hygienists.

During the summer of 1954 the Council on Dental Education gave full approval to the basic program of instruction, and in June, 1955, this approval was extended to cover the dental hygiene program. In March, 1955, the School of Dentistry was formally accepted as a member of the American Association of Dental Schools.

Service to patients in the dental clinics continued heavy during 1954-1955, and clinical material was more than adequate for the educational programs. Some 24,518 visits were made by patients to the teaching clinics during the year. In addition, private patients made 5,471 visits to the intramural (private) clinic. In each case, the figures were slightly higher than the previous year.

This school needs additional staff and financial support to extend graduate instruction to other specialties, to initiate more refresher and short-course activities for practicing dentists, to instruct regular students in the most effective use of dental assistants, and to allow the staff more time for research activity. Some of the necessary money may be obtained from special gifts or grants or from the Dental Foundation of North Carolina, which is an important ally of the School, but much of it must ultimately come from an enlarged state appropriation.

The School of Pharmacy

Enrollment in the School of Pharmacy continued at maximum capacity during 1954-1955, with 214 undergraduate and 16 graduate students in residence. In addition to the 41 degrees of Bachelor of Science in Pharmacy, 4 degrees of Doctor of Philosophy were granted at the June, 1955, commencement. Some 21 undergraduate scholarships and several graduate fellowships, contributed by interested individuals, by several pharmaceutical manufacturing firms,

and by the North Carolina Pharmaceutical Research Foundation, added materially to the over-all program.

At the time of its periodic re-examination in November, 1954, the American Council on Pharmaceutical Education continued the Class A rating of the school.

The need for a new School of Pharmacy building to train more pharmacists for service in North Carolina continues to be a pressing one, and it was a source of keen disappointment to all concerned that the 1955 General Assembly could not act favorably on this, the top University request in the capital improvements area.

At year-end, the pharmacy faculty and the University administration were studying ways of enlarging the teaching program in pharmacy on a temporary and emergency basis. In addition, plans were being considered for an extension program for the practicing pharmacists of the state. Finally, some tentative plans were being formulated to transform the total program of study for pharmacy students from four to five years, beginning with students entering in 1960, to conform with a 1955 ruling adopted by the American Association of Colleges of Pharmacy.

The Library

The Division Library has its main facility in the centrally located outpatient section of the North Carolina Memorial Hospital. There are, in addition, two branch libraries in the Schools of Nursing and Pharmacy and numerous small departmental collections.

As an entity, this library is less than three years old. Accordingly, a major activity during 1954-1955 related to organizing and increasing the library collections, filling in back periodical files, and assimilating the large amount of gift material that has been accumulated by the School of Medicine library committee during recent years.

At year-end 1954-1955, the Division Library collections totaled more than 13,000 books, more than 31,000 periodicals, and more than 5,000 pamphlets, with a considerable amount of material as yet unbound and unclassified. General circulation exceeded 16,000 in the Division of Health Affairs, and specialized services were available to health practitioners and hospitals throughout North Carolina.

By the end of 1954-1955, too, almost all available space in the library area was being used to the maximum and a major need for additional facilities had developed.

Division Maintenance

Special credit is due the Division Maintenance force for its work during 1954-1955 in completing necessary parking facilities and particularly in landscaping the grounds in the whole Health Affairs area. Though the main building program in the health complex was not completed until December, 1954, planting of the grounds was essentially finished during the spring of 1955, and the physical appearance of the Division of Health Affairs has already assumed much of the warmth and charm which is generally associated with Chapel Hill.

Administration

The function of the Division Administration is to seek necessary finances for Health Affairs programs, to assist in correlating programs with related interests within the Division and between Division units and related outside agencies, to help resolve different points of view within the Division, to be concerned with broad public relations aspects of Division programs, to expedite routine administrative processes, to assist in planning new programs, and to work toward the most effective integration of the Division of Health Affairs into the life of the people of North Carolina. All of these functions were attempted during 1954-1955. There is a serious need for staff assistance to the Division Administrator, in order to make possible effective administration in all key areas.

Two programs attached to the Office of the Administrator are worthy of special note. The first is the *Program Planning Section*, a research department financed by a grant from the Rockefeller Foundation and established to help the University of North Carolina develop the most effective relationship between its Health Center and the state as a whole. As a part of its work, a two-year study of the general practice of medicine in North Carolina was completed during 1954-1955, and the important findings of this study should soon be published. In addition, the *Social Science Section*, a department established by a grant from the Russell Sage Foundation and designed to serve as a bridge between the social and health sci-

ences on the University of North Carolina campus, has been very active. This department has important teaching as well as consultative and supervisory research functions in Health Affairs.

Summary and Conclusions

The Division of Health Affairs rapidly approached full operating status during 1954-1955. During that year more than 1,000 full-time students were given instruction in the several unit programs, and many hundreds of other students and health practitioners were given instruction in short courses, "institutes," and extension programs. More than 200 full-time faculty members of instructor rank or above, a similar number of part-time faculty members, and an additional 1,000 members of the service and auxiliary staffs were at work in the Division—teaching the students, caring for patients in the Hospital, and the Dental Clinics, and engaged in research activities.

During 1954-1955, the operating budget of the Division of Health Affairs exceeded \$6,000,000. Of this amount, about \$2,500,000 was required by the North Carolina Memorial Hospital and the Psychiatric Center, \$1,000,000 by the teaching programs of the School of Medicine, \$1,000,000 by other teaching units, \$250,000 by plant operation, library and administrative services, and \$1,250,000 (exclusively from gifts and grants) by the research programs and special training and service projects. Of the over-all \$6,000,000 budget, 40 per cent was derived from state appropriations, 40 per cent from receipts from hospital and dental patients and from tuition and fees from students, and 20 per cent from gifts and grants from philanthropic foundations, agencies and individuals.

As might be expected, no program of the size and complexity of the one under discussion could have been carried on without headaches and heartaches. Although there have been many of these, it appears the Division of Health Affairs is well along toward developing a program of which the University and the people of North Carolina can be proud.

The major *problems* of 1954-1955 have centered in: (a) certain conceptual disagreements about administrative organization and functioning; (b) the resolution of technical points relating to the supplementary compensation of the clinical faculty of

the School of Medicine and to the improvement of the administrative functioning of the private practice program; and (c) the slow rate of growth of the Hospital census and the high percentage of part-pay patients, which, taken together, have produced serious problems of Hospital finance.

The major *needs* include: (a) additional faculty to serve the growing teaching and patient care programs and allow the present faculty more time for research; (b) new buildings for the Schools of Pharmacy and Public Health, new office space and research facilities for the School of Medicine, new office and classroom space for Nursing, and new dormitory space for Health Affairs students; and (c) full-time assistance to the Division Administrator in the fields of public information and daily routine operations.

Some of the major *opportunities* of the Division of Health Affairs are: (a) the planning and initiation of further activities which will carry the benefits of the University health program to all parts of North Carolina; (b) fuller use of Station WUNC-TV as an educational and public relations medium, following up an excellent program series begun in January, 1955; and (c) the promotion of the Medical, Dental, and Pharmaceutical Foundations in their work to serve the growing programs of the Division of Health Affairs.

The Function of the Consultant

When the correct diagnosis has been made, patients suffering from various forms of heart failure appear to be treated quite intelligently by the average practitioner in this country at the present time. This was not true a few decades ago. At that earlier period it was a common experience for a consultant to see a critically sick patient and restore him promptly to good health. Digitalis and diuretics were not being properly employed. Massive hydrothorax was overlooked. Many errors in diagnosis were being made. There was a large gap between the knowledge of the expert and that of the family physician. The situation has entirely changed. The function of the consultant nowadays often consists in supporting the hand of the attending physician and comforting the family with the knowledge that everything helpful is being done. Only infrequently—and then for the most part when the diagnosis of wrong—does the consultant aid materially in the care of cardiacs.—Levine, S.A.: Pitfalls in the Care of Cardiacs, *Ann. Int. Med.* 42; 1270 (June) 1955.

SINUSITIS IN CHILDREN

JOHN S. GORDON, M.D.
CHARLOTTE

Appreciation of the importance of infection in the nasal accessory sinuses of children has increased in recent years commensurate with the development of chemotherapeutic and microbiotic agents which make the control of infection in these areas efficient and reasonable. The purpose of this discussion is to emphasize some of the new approaches to the problem of infection in the sinus system of children. In order to accomplish this aim effectively, it is desirable to review briefly the anatomy and physiology involved.

Anatomy and Physiology

Embryologically, the sinuses represent out-pouchings of the olfactory bulb of the embryo. Anatomically, in children the ethmoid cells are present to a considerable degree, and the maxillary sinuses are also present though very small in size until approximately 6 years of age. The sphenoid sinus is usually present at birth; the frontal sinuses develop at 10 to 12 years. Pertinent is the fact that the ostia leading to the ethmoid sinuses become small in size relative to the volume of the sinus at an early age, usually at 1 or 2 years of age. The sphenoid sinus is rarely infected in children. The growth of the maxillary sinus is somewhat slower, and until the age of 3 to 4 years the opening into the maxillary sinuses is sufficiently large to guarantee drainage. From this age on, the ostia gradually become both actually and relatively smaller, and the floor of the maxillary sinus descends with growth, thus developing the inefficient drainage system which is one of the fundamental causes of refractory infections of the maxillary sinus in adults⁽¹⁾.

Histologically, the epithelial lining of the sinus cavities is the same as that of the nose and the rest of the respiratory tract. It is a ciliated columnar epithelium, and it is now well established that all these areas of epithelial tissue participate sympathetically, to varying degrees, in the same reactions as any diseased portion of the respiratory tract⁽²⁾. This explains the volume of nasal secretion coming from the respiratory tract of a child, for one infected sinus area cannot

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produce the large amount of secretion encountered during an infection which involves one small respiratory area such as a sinus. It is well to remember that the ethmoid system represents the major portion of the sinus area in children until the age of 4 or 5 years, and after that the maxillary sinuses also become important. Also, the entire respiratory system responds physiologically to infection in any small portion of it, and it may be the magnitude of this reaction rather than the magnitude of the infected area which produces the symptoms.

Etiology

The etiology of infections in the nasal sinuses in children is no different from that of sinus infections at all ages. A good many of these are primarily due to the common cold, which, when it invades the respiratory tract, involves the whole of it and makes the respiratory system more susceptible to bacterial invasion. At present our inability to control the pathogenicity of the common cold virus complicates control of all sinus infections. The way in which the mucous membrane of the individual patient responds to any infectious organism, either viral or bacterial, is of paramount importance. If the membranes respond in a hyperergic or a typically allergic manner, then the response will be more overwhelming and the infection will be accompanied by serious symptoms. It also will be more difficult to treat. Any anatomic deviation which interferes with normal ventilation of the nose, sinuses, or other areas of the upper respiratory tract is an important predisposing factor in infection of the sinuses of children. Typical of these anatomic factors are adenoid masses obstructing the posterior portion of the nose, marked septal deviations, and congenital malformations of the air passages. Among bacterial infections in the sinuses of children, the hemolytic staphylococci are most frequent, followed closely by pneumococci and hemolytic streptococci. In recent years the use of microbial chemicals has greatly reduced the incidence of hemolytic streptococcal infections. Exposure to chilling, general poor health, fatigue, and dietary deficiencies are all important predisposing factors to sinus infection.

Perhaps the predominating factor is the matter of hyperergic reaction to infectious invasion of the respiratory tract. We prefer the term "hyperergic" to "allergic," inas-

Table 1
Classification of 35 Consecutive New Cases of Sinusitis in Children

Age (Years)	Eosinophils In Nasal Smear	No Eosinophils; Only History of Allergy	No Allergy	Total No. Patients
1-5	6	1	4	11
5-10	17	1	4	22
10-15	2	0	0	2
Per cent of 35 Patients	71%	6%	23%	

much as it explains more accurately what we believe takes place. This reaction is characterized by massive edema of the nasal and sinus tissues, accompanied by venostasis and a paling of the mucous membrane. A copious outpouring of thick and tenacious mucous then follows, the quantity of which may actually overwhelm small children. The interference of this secretory discharge with the normal ciliary action is important in breaking down the resistance of the normal tissue to invasion by bacteria. Also, the edema of the tissue seems to be important in preventing an adequate local immunologic response against the invading bacterial agent. It is the combination of this edema and excess secretion which we consider a hyperergic reaction of the respiratory tract⁽²⁾.

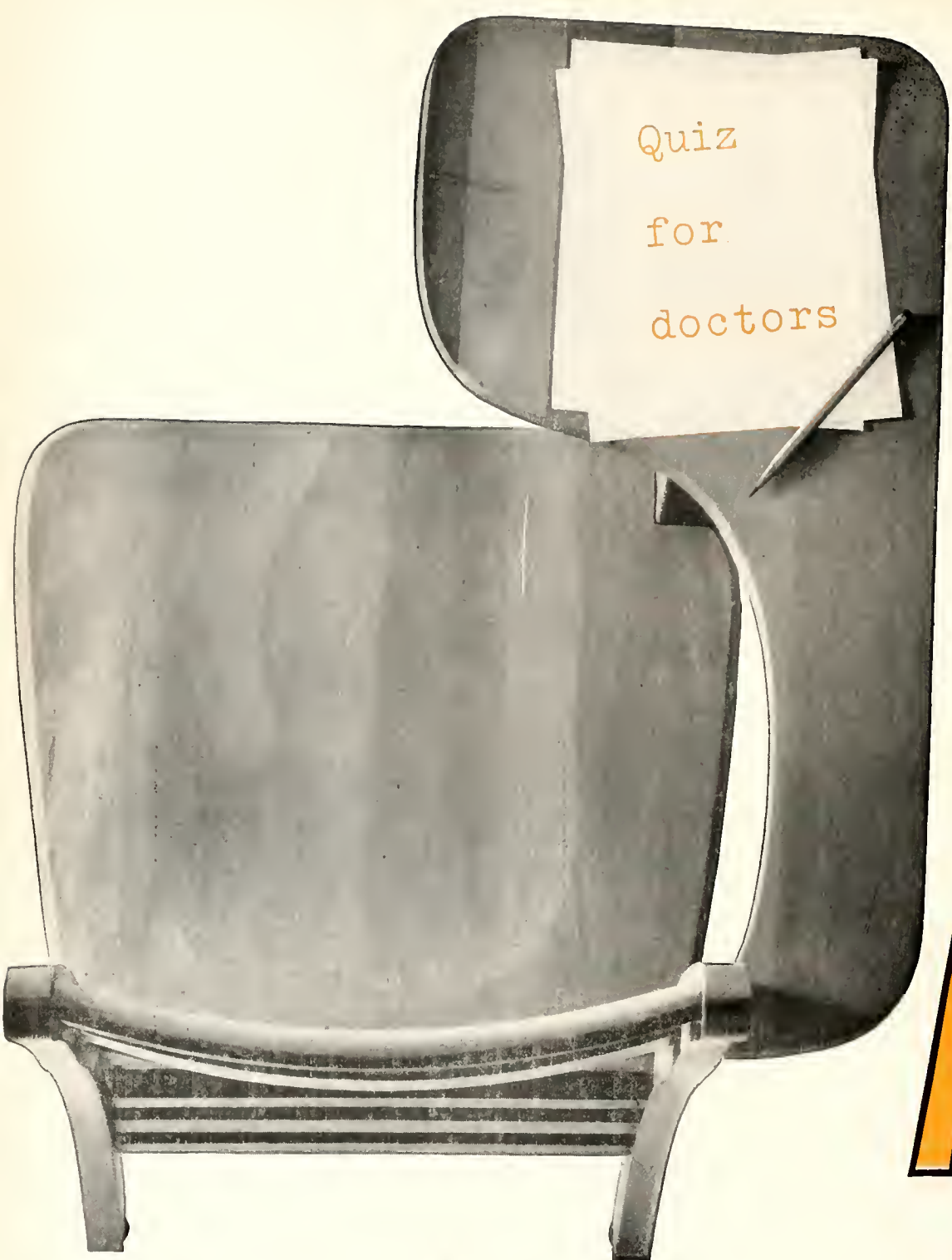
This reaction warrants more extensive investigation. It may be important, however, that of 35 consecutive new cases of sinus infection in children, our investigation revealed evidence of allergic or hyperergic reaction in the respiratory mucous membrane in 27 (see table 1). This information was based on the finding of eosinophils by the Hansel technique⁽⁴⁾ in the nasal secretions of 71 per cent of the patients. Twenty-one of these patients had a positive history of family allergy. Only 2 of our patients gave a history of allergy without the presence of eosinophils. Because of this high correlation between a family background of allergy and the presence of eosinophils in the nasal secretions, we feel that examination of the nasal secretions for eosinophils by the technique described by Hansel is well worth while in detecting a hyperergic problem⁽⁴⁾.

The clinical symptoms of these patients may be quite confusing. In 25 of the same group of 35 patients mentioned above, the presenting symptom was recurring upper respiratory tract infection, by which we



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Q. What are some of the advantages of ACHROMYCIN?

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Q. Exactly how broad is the spectrum of ACHROMYCIN?

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Table 2
Frequency of Symptoms and Signs in 35
Consecutive New Cases of Sinusitis
in Children

Symptom or Sign	No. Patients	Per Cent
Recurrent respiratory tract infections	25	71
Cough	21	60
Nasal obstruction and discharge	19	54
Fever	18	51
Sore throat	12	34
Ear trouble	11	31

mean an infection which relapses or recurs within a very few days. The importance of this symptom cannot be overestimated (see table 2). The second most common presenting symptom was cough, and the third, nasal obstruction and discharge. The latter appears somewhat infrequently, partly because many of the children are too young to complain of nasal obstruction, and partly because the parents may not be aware that it is an important symptom of their children's respiratory tract illness. Fever was a complaint among these patients, but in only 18 of the 35 was it high enough to be considered of clinical importance. In our opinion, it is the absence of fever that permits the situation to become chronic. Parents tend to minimize the illness, not fully understanding its importance since there is no fever, although there may be other evidences of respiratory tract disturbance. Sore throat should be included among the common symptoms of this disease also. Other symptoms referable to respiratory tract infection, such as recurrent earache or disturbance of hearing, take a minor part in the list of complaints.

Diagnosis

The diagnosis of sinus disease in children requires a thorough examination of all parts of the upper respiratory tract. Characteristically, there is usually present a good deal of nasal discharge, which may be of varied degree of purulency. The nasal mucosa may be either red and congested or extremely congested and quite purplish in appearance. At this examination any anatomic obstructions of the airway, such as hypertrophic adenoids or septal deviations, are noted. The pharynx is apt to be hyperemic or even frankly inflamed; the lymphoid structures of the posterior pharyngeal wall are usually hypertrophic. The tonsils, if present, may also show evidence of low grade infection.

Cervical lymph nodes are frequently involved in the infectious process, and so enlarged as to be palpable. They may even be tender. Considerable attempt should be made to examine the larynx. It is usually inflamed. The ears may or may not be involved in the process.

We believe that transillumination of the sinuses in children by any method preferred is reasonably accurate, and we place a good deal of dependency upon this procedure. We resort to x-ray studies of the sinus system only when the clinical findings plus transillumination do not coincide with all other findings and with the history. As a result, we have x-rayed less than 1 out of 20 of our patients⁽⁵⁾. Occasionally, we resort to this method when, in spite of apparently adequate information from the other simpler methods of examination, the clinical course is not what had been expected.

In the laboratory we believe that the examination of the nasal secretions is quite worth while. We regularly employ either the Hansel stain⁽⁴⁾ or a modified Wright stain technique. By either method we estimate the percentage of eosinophils in the secretions. Also, we can get a rapid indication of the types of bacteria present. More importantly, however, we can differentiate the pathologic nature of the problem.

For years otolaryngologists have been examining nasal smears for eosinophils, but they gave little attention to the epithelial cells in the smear. The work of Bryan and Bryan⁽⁶⁾, in 1952, brought to our attention the possibilities of more exact diagnoses by careful scrutiny of the individual epithelial cells in these smears. At first we followed Bryan's technique exactly, using the Papanicolaou staining method. More recently we have successfully modified Wright's stain technique and have become familiar with the smears made by this method, so that we are now able to differentiate bacterial infection, viral infection, and allergy on routine nasal smears. We also culture the nasal secretions and determine the bacterial species as well as the antibiotic sensitivity of the organisms. We feel that the nasal smear and the culture of the secretions are more significant and no more costly than a roentgenogram would be, and in our hands these studies largely replace x-ray studies.

Treatment

As regards the treatment of sinusitis in

children, we feel that it is extremely unwise to generalize. In the first place, most of the patients who fall into our hands have already failed to respond to the more usual forms of treatment of upper respiratory tract infection. For this reason, we feel justified in making a more complete examination, with laboratory studies, before initiating treatment.

Our treatment falls into three general categories, which we apply simultaneously. The first category is therapy directed at combating the bacterial infection. This therapy is based upon experiences with the organism producing infection in the community at the moment, plus the cultural and sensitivity reports from the laboratory. It is well to bear in mind that most of these children with sinusitis, as previously pointed out, have allergic backgrounds and may have already exhibited allergic manifestations to some of the chemotherapeutic agents or microbials. A careful history on this matter helps to avoid secondary drug reactions. In some instances it is necessary to change the microbiotic agent after therapy is begun. This is especially true if the clinical course is not improving as anticipated. At times it may even be valuable to reculture secretions and do additional sensitivity studies if a good response to the first-choice antibiotic is not obtained in 7 to 10 days.

The second phase of treatment, applied simultaneously with that directed against the bacterial agent, is aimed at improving the ventilation and clearing the secretions from the nose and sinuses. We have found that careful shrinkage of the nose and ostia in the office, mass suction, and then gentle irrigation with normal saline is often helpful in promoting initial drainage from the ethmoid system, even in very young children. If done gently and without hurry, this can be accomplished in surprisingly young children without upsetting them. We use a trap type, rubber-tipped suction apparatus for evacuating the ethmoids and find that, when used carefully, it produces no untoward trauma. The cleansing can be repeated at one to two-day intervals if needed.

We frequently administer local medication in the form of nasal drops, especially in children more than 3 or 4 years of age. In our hands a 0.5 per cent solution of Clopane* has proved the most effective in this

field. Fewer patients are sensitive to it, and it seems to have a decided effect in reducing the viscosity of the nasal secretions. On occasion we add 2,500 units of bacitracin to 1 ounce of 0.5 per cent Clopane solution. I have found that this combination seems to clear up the infection in the posterior pharynx more rapidly than does plain Clopane, and we have used it in a great number of cases without any evidence of drug reaction. More recently, we have employed in the same way the new nasal solutions containing small amounts of hydrocortisone and neomycin sulfate, or neomycin gramicidin and polymyxin combinations*. These preparations seem equally effective and safe, though more expensive.

The third approach that we usually use in these patients is some antihistaminic drug⁽³⁾. In children we prefer Benadryl† in the form of an elixir, usually giving a teaspoonful three or four times a day. Occasionally this drug is not tolerated because of nausea or drowsiness; then another is selected. We have found Phenergan‡ to be useful also. It comes as a syrup and is easy to administer to children. In the older children we may give larger doses of Benadryl or switch to one of the other antihistaminics, such as Histadyl** or Co-Pyronil††. It is necessary to keep in mind that children tolerate larger doses of antihistaminic drugs than do adults. It may be necessary to give a considerably larger dose per pound than one would give an adult in order to get the desired effect. This method seems to be without danger if not carried on too long. We have had no instances of blood dyscrasia from these drugs. The commonest untoward reaction is nausea and vomiting. Occasionally, drowsiness is a problem.

We usually continue this complete regimen of treatment for five to seven days and sometimes continue the antihistaminic drugs an additional week, after all evidence of bacterial infection has subsided. This practice reduces the incidence of relapse appreciably.

Children rarely require surgery for the control and cure of sinus infections. Occa-

*Trisocort. Manufactured by Smith, Kline and French Laboratories, Philadelphia, Pennsylvania.

†Benadryl. Manufactured by Parke, Davis & Company, Detroit, Michigan.

‡Phenergan. Manufactured by Wyeth Incorporated, Philadelphia, Pennsylvania.

**Histadyl. Manufactured by Eli Lilly and Company, Indianapolis, Indiana.

††Co-Pyronil. Manufactured by Eli Lilly and Company, Indianapolis, Indiana.

*Manufactured by Eli Lilly and Company, Indianapolis, Indiana.

sionally, we irrigate the maxillary sinus through the natural ostium, usually under sedation and local anesthesia. In rare instances we have to remove nasal polyps that interfere with sinus drainage. We believe that polyps within the sinuses will regress if all other factors of the process are controlled. More radical surgery is contraindicated in childhood sinusitis.

Summary

I have discussed the anatomy, physiology, and etiology of sinusitis in children. I have stressed the importance of recognizing the hyperergic reaction as a basis for infections. In very brief form I have mentioned the means by which I diagnose and treat these infections in children.

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RETROLENTAL FIBROPLASIA

Clinical and Therapeutic Observations

CLINTON B. CHANDLER, M.D.

and

CHARLES H. PEEBLES, JR., M.D.

DURHAM

The purpose of this paper is to report the incidence of retrolental fibroplasia, and our observations on the etiology and treatment, at Watts Hospital in Durham, North Carolina, from August, 1951, through December, 1954.

This condition was first recognized as a disease of premature infants in 1942 by Terry.⁽¹⁾ Since that time it has been extensively investigated. It now ranks first among the causes of blindness in children in the United States and is the foremost problem other than death itself in the care of premature infants.

Opinion as to the nature and origin of the retrolental membrane has differed considerably since its early description by

Terry. He proposed that the condition is due to persistence and overgrowth of the hyaloid artery. Reese and Payne⁽²⁾ suggested that it originated as hyperplasia of the primary vitreous. Krause⁽³⁾ thought that the disease was a prenatal abnormality of the cerebral and retinal neuroectoderm.

Material and Method

All infants in the group under consideration weighed less than 5 pounds at birth, and were admitted to the premature nursery along with premature babies born elsewhere and transferred to this center under the Public Health Premature Program. Several children who were referred to us because of eye disease were found to have a history of prematurity and to show typical retrolental fibroplasia. They are included in this report and are so designated.

While hospitalized, the babies were examined weekly by one of us except where the general clinical condition made such examination unwise. The infants received incubator care (Gordon Armstrong), and two isolettes were obtained — the first in January, 1952, and the second in August, 1953 — for those in poor general condition.

The pupils were dilated by the instillation of one drop of 1 per cent homatropine, followed in five minutes by one drop of 2½ per cent Neosynephrine. With few exceptions, this dosage produced adequate dilation. The direct ophthalmoscope was used for examination; lid retractors were found to be unnecessary. When a weight of 5 pounds was obtained, the babies were discharged from the hospital and followed in the outpatient clinic at McPherson Hospital. They were examined every two weeks until the age of 2 months, then monthly until the age of 6 months. In some instances further follow-up was made at 9 and 12 months during the early part of the study.

In several instances where distance prohibited follow-up examinations, ophthalmologists have been kind enough to report to us. The North Carolina State Commission for the Blind and the State Welfare Department were given the names of babies who had not been adequately followed. Through the efforts of these agencies we were able to secure adequate information in many cases.

At the beginning of this series all premature infants were placed in incubators

and supplied with an oxygen concentration of 6 liters per minute and so maintained until they appeared to be out of danger or had reached a weight level at which oxygen was no longer necessary. They were then removed from this high oxygen concentration. Beginning in May, 1952, all babies were given oxygen on admission to the nursery; however, the amount was decreased as quickly as thought advisable. The decrease was gradual—1 liter first, then another liter one or two days later, until the oxygen was discontinued entirely. This regimen was continued until October, 1953; since then no oxygen has been given except when dictated by the clinical condition of the baby. The nurses now give oxygen if the baby shows distress or cyanosis, discontinuing it as soon as the baby improves. The time varies from an hour to a day or more. With few exceptions, there has been no prolonged use of oxygen since the beginning of this schedule. The majority of the babies usually receive some oxygen for the first 24 hours, and in some instances for the first several days, but no greater amount than 1 or 2 liters.

Incidence

The following tables show the number of cases and breakdown relative to retrolental fibroplasia.

The largest number of cases, including those marked by early change and regression, were seen in 1952. In 1951 there were only six months during which examinations were conducted, and proportionately there were as many cases during this period as during the following year. In 1954 only one

Table 1
Cases of Retrolental Fibroplasia
Watts and McPherson Hospitals
1951-1954

	No. Cases
Watts Hospital	
Adequate Follow-up	126
Poor Follow-up	52
	178
McPherson Hospital Only	8
Total	186

patient manifested any signs of retrolental fibroplasia; however, fewer babies were admitted to the nursery that year.

Table 3 attempts to correlate weight with the incidence of retrolental fibroplasia.

In our series, no baby weighing more than 4 pounds had the disease. However, one infant born elsewhere with a weight of 5 pounds, 3 ounces, who was later seen at McPherson, did have the disease. This baby received oxygen for three weeks. The majority of the infants weighed less than 3½ pounds (table 3).

Clinical Course

The development of retrolental membranes in these premature infants was similar to that described by Owens and Owens⁽⁴⁾. For several weeks the fundi appeared normal, then the arteries and veins became dilated, the change being more marked in the veins. The vessels gradually increased in size and became tortuous. The tortuosity was more marked in the arteries, and sometimes the vessels virtually doubled back on themselves. These changes were fol-

Table 2
Retrolental Fibroplasia
Analysis of Cases

Year	Total No. Premature Infants	Died	Retrolental Fibroplasia	Regression to Minimal Retinal Changes	Normal	Ratio:	Patients with Retrolental Fibroplasia Hospitalized Elsewhere and Followed in McPherson Clinic
Before 1951	2						2
1951	47	12	5	1	27	1:8	2
1952	65	2	6	5	49	1:6	3
1953	42		2	4	35	1:7	1
1954	30		1	0	29	1:30	0
	186	14	14	10	140		8

Table 3
Weight Incidence

	1½ to 2½ pounds	2½ to 3½ pounds	3½ to 4½ pounds	4½ pounds or more
Retrolental fibroplasia	3	7	4	
Regression	3	4	3	
Not followed at Watts Hospital	3	3	1	1
	9	14	8	1

lowed by grayish elevation of the retina in the periphery, usually on the temporal side. Fanning out over these elevated areas many tortuous or small, newly formed vessels could be seen. The disk commonly became blurred and the retina edematous. The grayish mass at the periphery increased in height and other areas also became elevated, until a gray membrane with many vessels coursing over it billowed forward at the periphery. In the final stage the folds formed a complete membrane, fusing together in the center. Later secondary changes were shallowing of the anterior chamber, with complete loss of the chamber in some cases. Increased tension was common, manifested by steamy corneas and pain. The end result in these instances was phthisis bulbi.

Treatment and Results

All the babies with frank retrolental fibroplasia and those showing early retinal changes with regression received from 2 to 6 liters of oxygen for periods ranging from 16 days to two months. Seventeen of the patients received 6 liters per minute until adequate weight gain was obtained or the general condition permitted discontinuance of the therapy.

From 1951 to 1953 we saw several babies whose retinal vessels became slightly dilated without treatment, then gradually returned to normal size. In most instances, however, if the baby had been removed from oxygen and the vessels began to dilate, they were again given from 1 to 2 liters of oxygen for one to two weeks, and in many cases rather definite and dramatic reduction in the caliber of the vessels was observed. There was no decided improvement unless oxygen therapy was started before the stage of marked retinal separation. In several cases in which oxygen was resumed, the

vessels again became dilated when the oxygen was removed. Still another course was given, with return of the vessels to normal size. It was observed that no case in which oxygen was used therapeutically progressed to the formation of complete retrolental membranes (stage 5). It is quite possible, however, that the vascular dilation would have subsided spontaneously with or without the use of oxygen.

Generally this plan of therapy was used throughout our series: Those babies showing dilated vessels were returned to 1 to 2 liters of oxygen. We also gave ACTH to a total of 4 babies, but could see no improvement in the eye condition.

Interestingly, a pair of identical twins each developed retrolental fibroplasia in one eye—twin A in the right and twin B in the left eye. These children are now 3 years old. The diseased eyes are grossly smaller than the other eyes and glasses have been prescribed requiring -13.00, the other -12.00 lenses in the better eye.

After the policy of no oxygen except for respiratory distress was adopted, only 1 case of retrolental fibroplasia developed, and this child had received oxygen elsewhere for two days prior to admission to the premature nursery and then received 1 to 2 liters intermittently for 14 days. His retinal vessels began to dilate about the time he was discharged, and he was followed in McPherson Hospital Clinic, readmitted to Watts Hospital, and received oxygen (2 liters per minute) for two weeks, with improvement. The final results were detachment in both eyes, confined to the far periphery, and a marked esotropia.

It is now rare to see the early changes of vascular dilation: in only one case other than the one cited above has this change been noted in the past 15 months.

Conclusion

From the limited number of cases seen here, it is concluded that high oxygen concentration bears a definite relationship to the incidence of retrolental fibroplasia, and with reduction in the amount of oxygen given premature infants the incidence of the disease has decidedly decreased.

Further investigation recently reported⁽⁵⁾ substantiates these findings relative to the amount and administration of oxygen.

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PREOPERATIVE CARE AND PREMEDICATION

HOWARD M. AUSHERMAN, M.D.
CHARLOTTE

The only part of an operation that many a surgical patient will remember may be going to sleep and awakening. There is no substitute for careful investigation and pre-anesthetic preparation of the surgical patient, not only for his mental and physical comfort, but for his safety. In many localities the preparation and evaluation of the preoperative patient is a combined effort on the part of the surgeon, internist, and anesthesiologist. In an unusual case, it is not uncommon for a psychiatrist, cardiologist, obstetrician or other specialist to be called to assist in making the patient safe for anesthesia and surgery.

Psychologic Preparation

Usually the surgeon and internist assemble the details of the investigation in the preparation of the surgical patient. The anesthesiologist should, at the time of his pre-anesthetic interview with the patient, evaluate the physical status in the light of this pertinent information.

Every patient should be visited preoperatively by the anesthesiologist. This interview is important for several reasons. The patient may be tense and apprehensive at the thought of being carried into unconsciousness, for it is a fact that more patients fear the anesthesia than do the operation. The anesthesiologist may, in the eyes of the surgeon, be competent, capable, and skillful in administering the anesthetics, but the patient can judge only by what he observes during the interview before anesthesia. The patient is usually pleased when

someone* from the department of anesthesia considers him important enough to visit him before the operation. He welcomes the opportunity to disclose anything regarding previous anesthesia or his health that may be helpful in assuring him a safe and pleasant journey to and from the operating room. The visit allows him the privilege of asking questions regarding the proposed anesthesia, and the anesthesiologist the opportunity of answering, resulting in a better understanding between the two. In discussing the proposed anesthesia the anesthesiologist must choose his words carefully, but with complete honesty. If a spinal injection is to be used, the patient should be told so without subterfuge. Remember, even a mediocre lawyer can bring out the fact that a "subdural block," "saddle block," "shot in the back," or whatever the procedure is called is still spinal anesthesia.

It surely is not necessary to go into the details of the technique (endotracheal, for example), for this may only frighten the patient. Calm assurance that the best anesthetic agents and methods of administration will be used as skillfully as possible will go a long way toward establishing the patient's confidence. In the face of direct questions and requests, such as, "Will you use only Pentothal?" or "Promise that you will use no ether," it is wise to be honest and say that you will use the agents and techniques that provide the most comfort within the limits of safety and good operating conditions for the surgeon.

During the interview the patient should be told in a general way about the anesthesia to be used and the operation to be performed, as well as the time of operation and the surgeons doing it. He is told that he may receive a capsule and a hypodermic injection before leaving his room for surgery, and that he will feel sleepy or groggy as he arrives in the operating theater. Frequently at this time he may request that he be put to sleep if a spinal or regional method is used or that he not be "smothered down" by a mask on his face. The anesthesiologist can allay these fears by assuring him that, even though he is to have a regional or spinal anesthesia, he can be put lightly to sleep; or if he is to have a general anesthesia, induction by vein will avoid the sensation of the mask on his face. These

*Read before the Section on Anesthesia, Medical Society of the State of North Carolina, Pinehurst, May 3, 1955.

facts are comforting and serve to make a calm cooperative patient out of the most fearful.

When this psychologic preparation has been carried out the night before the operation and the proper preanesthetic medication given, the patient usually comes to the operation room calm and confident. The noise and confusion sometimes found in surgeries should be minimized as much as possible. The patient should be greeted by name and transferred gently from the stretcher to the operating table. Better cooperation is obtained if quiet words of assurance rather than restraints are used during induction. Today, in most instances a small amount of one of the ultrashort-acting barbiturates is valuable in bridging the gap between wakefulness and anesthesia, and when properly used, is safe and pleasant.

Determining the Physical Status

During the interview at the patient's bedside, much valuable information can be obtained. A glance at the patient tells his physiologic age (which is more significant than his chronologic age), approximate weight, general health, color of skin, degree of oxygenation, quality of respiration, nutrition, and mental outlook.

The functional state of the heart may be learned by questions regarding palpitation, shortness of breath, ankle edema, or ability to exercise. Questions about the reason for the hospitalization will bring answers as to the duration and severity of the present illness. This interview gives the anesthetist an idea of the patient's general condition, whether robust or weak, alert or mentally dull, keen or apathetic.

The course of any previous anesthesia should be learned. Perhaps the patient has had an unhappy experience with some anesthetic drug or method which the anesthesiologist should know about. Any drug sensitivity to morphine or morphine derivatives, for example, should be known in order that other drugs may be substituted. The patient may report prolonged nausea and vomiting from a certain anesthetic drug. While such effects are difficult to evaluate, clues may be obtained and this set of circumstances avoided. The patient may have objections to local, regional, or spinal anesthesia which he has previously had or heard about. Un-

less there is some definite clear-cut reason why he should not receive a general anesthesia, it is often very difficult to convince him of the merits of other methods when these are carefully and skillfully carried out.

Occasionally a patient will give a history of being a "bleeder." It is always wise to heed this warning and recheck the bleeding, clotting, and prothrombin time before anesthesia and operation are carried out.

Any pertinent data (clinical or laboratory) from the patient's chart should be summed up and recorded on the anesthesia record. By reviewing the positive findings, together with the observations obtained during the interview, the anesthesiologist is able to evaluate the physical status—that is, the degree of systemic disease and impaired function shown. It is axiomatic that a knowledge of the normal physiology of respiration and circulation is necessary in order to recognize abnormalities in these systems.

Because of a better understanding of electrolyte and fluid balance and improved laboratory methods, it should be possible to maintain surgical patients in balance. The more common problems of fluid and electrolyte balance encountered are usually a result of loss of abnormal amounts of salt, water, or potassium from vomiting, diarrhea, sweating, gastric suction, drainage from intestinal, biliary and pancreatic fistula or ileostomy. Electrolyte abnormalities may be associated with certain cerebral lesions⁽¹⁾, diabetic coma, bilateral ureterosigmoidostomy, bulbar poliomyelitis, anuria, and congestive heart failure.

Scribner⁽²⁾ has described a practical, accurate, and inexpensive method of accomplishing a desirable state of fluid and electrolyte balance at the bedside. His method (as all others) pre-supposes an accurate 24-hour intake and out-take program. Knowing this, a physician or trained technician can determine the chloride and bicarbonate content of the plasma, urine, and other fluid excreted by the patient. Knowing the output, the necessary daily intake of water, salt, and potassium can be calculated and supplied.

Method of Grading

It is impossible to assess surgical risk with reference to such variable factors as (1) the seriousness of the operation, (2)

the patient's physical condition, (3) the skill of the surgeon and, (4) the outcome of similar operations in the past. The Committee on Records and Statistics of the American Society of Anesthesiologists, therefore, deemed it advisable to grade only one factor, calling it not the surgical risk, but rather the surgical condition or physical status of the patient. This term refers to the amount of systemic disturbance that impairs the vital functions. Following are the seven grades suggested:

I. No organic or local disease causing systemic disturbance. Examples are conditions not causing system effects

- A. Fractures not associated with blood loss and shock
- B. Congenital deformities unassociated with systemic disturbance
- C. Uncomplicated hernia, and so forth

II. Moderate systemic disturbance

- A. Mild diabetes
- B. Early incarcerated hernia
- C. Moderate anemia

III. Severe systemic disturbance

- A. Poorly controlled diabetes
- B. Advanced intestinal obstruction with severe physiologic disturbances
- C. Pulmonary tuberculosis with reduced vital capacity

IV. Systemic disorders which are an imminent threat to life

V. Emergency surgery on grade I or II patients

VI. Emergency surgery on grade III or IV patients

VII. Moribund patients

Reversible pathologic processes such as secondary anemia, hypoproteinemia, dehydration, diabetes, and so forth should be vigorously treated if the poor risk patient is to be given the best chance of surviving. One should not spend too much time dealing with irreversible pathologic processes such as congenital heart disease, emphysema, and chronic liver disease.

Premedication

Most of us agree that preanesthetic medication, properly balanced to suit the needs of the individual patient for his specific operation, is desirable.

The choice and dosage of drugs vary according to the following factors:

1. *Age*

According to the Dubois curve, basal metabolism varies distinctly with different ages. At birth and in early infancy it is low—35 to 40 calories per square meter per hour, but rises rapidly the next few months between 45 and 50. It reaches a maximum of 55 cal/meter/hour in the second year of life, from which time it declines to about 41 cal/meter/hour at 12 years. Between 12 and 14 years (puberty) the basal metabolic rate is out of proportion to size, rising to about 45 cal/meter/hour. Thereafter the rate gradually declines to 35 at 70 years. It is obvious that depressant drugs such as morphine are metabolized faster, and must be given in relatively larger doses at 1 and 2 years of age and at puberty.

2. *Sex*

The dosage is lower for females than for males. At 2 years it is 4 per cent less, at 13 years 9 per cent less, and in adult life 7 to 10 per cent less.

3. *Toxemias*

The function of the thyroid gland influences the metabolic rate. A larger dose is required in hyperthyroidism, a smaller dose in hypothyroidism.

4. *Temperature*

The basal metabolic rate increases 7 per cent for each Fahrenheit degree rise in temperature.

5. *Emotions*

Fear and excitement both increase sensitivity to pain by as much as 20 per cent. An estimate of the emotional excitability can be made after a short conversation with the patient.

6. *Pain*

Increase in the basal metabolic rate is directly proportional to the increase in the intensity of pain.

7. *Disease*

- a. A patient should be evaluated according to his illness. A victim of osteomyelitis with severe infection may be rated toxic, in poor nutrition, and with a liver unable to metabolize large doses of morphine.
- b. Anemic patients do better on smaller doses of depressants.

- c. Patients with chronic disease such as tuberculosis or empyema may have acquired tolerance to opiates and sedatives because of extended courses of these drugs.

8. Agents

The modifying factor is the potency of the anesthetic agent. The degree of the sedation should vary inversely with the potency of the agent.

Proper premedication, with consideration of the factors mentioned, is important for smooth anesthesia.

Peanesthetic drugs

I will mention a few broad principles of premedication without going into great detail regarding the various drugs which are commonly used successfully.

If the patient is apprehensive, one of the short-acting barbiturates given one and one half to two hours before the operation usually allays nervousness. The maximum decrease of respiratory exchange occurs approximately one hour after oral intake. Barbiturates are less desirable in the elderly. Morphine, morphine derivatives, or synthetic substitutes such as Demerol should be given according to age and physiologic factors related to the basal metabolic rate, increasing or decreasing the dose proportionately. The maximum respiratory depressant effect of morphine occurs within 30 minutes after the subcutaneous injection; the maximum depression of the basal metabolic rate within 60 minutes, and the maximum sedative effect within 90 minutes.

Belladonna drugs

Atropine inhibits secretions, counteracts the respiratory depression of morphine to some extent, and reduces laryngospasm, especially that resulting from Pentothal. It also blocks the vagus in large doses, thus increasing cardiac rate.

Scopolamine has similar action except that it has greater drying action, depresses rather than stimulates the cortical centers, and produces a degree of amnesia and sedation.

Atropine is preferable in the elderly patient, for occasionally when scopolamine is given to this group in therapeutic amounts it may produce excitement, restlessness, hallucinations, delirium, or stupor. The ratio

of 25:1 between morphine and a belladonna drug is accepted as the optimum.

Summary

It is the duty and responsibility of the anesthesiologist to see that the patient scheduled for anesthesia and surgery is in optimum condition. This preparation should include the following:

1. A review of the complete work-up as recorded on the chart
2. Preanesthetic interview of the patient by some one from the anesthesia department
3. Evaluation and grading of the patient from the data gathered in this manner
4. Ordering the proper preanesthesia medication and other fluid and blood replacement, regulation of cardiac reserve, or any other therapy indicated in order to put the patient in the best possible condition before anesthesia and surgery
5. Choosing the most suitable anesthetic drugs and method of administration.

If this program is carried out conscientiously, the patient will be prepared psychologically, pharmacologically, and physiologically to receive the best anesthesia obtainable.

Discussion

Dr. Fabian: First, I would like to congratulate Dr. Ausherman on his paper. I think it was excellent and precise and informative, and I would like to comment on only two points by way of re-emphasis. First is the accurate preoperative evaluation of the patient's cardio-pulmonary status, particularly as regards acute and subacute pulmonary infections. There have been several recent reports on this subject, one a text on the abnormal physiology of cardiopulmonary disease by physiologists who stated that some tens of thousands of patients have had acute preoperative pulmonary disease, including the common cold with the usual runny nose, sneezing, and mildly red throat. Sixty-five per cent of these patients have demonstrable pulmonary lesions of pneumonic processes, and I think that it would behoove us to evaluate their cardiopulmonary status.

Second, beware of the patients who say, "If you put me to sleep I'll die," because many of them will. I have had personal experience with 3 patients who told me this, and they were as good as their word. Preoperative medication and preoperative psychologic evaluation is of utmost importance.

Dr. Daniel L. Crandell (Winston-Salem): I would like to add two points. One is the abuse of the belladonna drugs, such as atropine and scopolamine. They block the fibers to the sweat glands which reduce the heat, and patients with elevated temperatures who receive doses of atropine or scopolamine are liable to go into heat extension because of the inability to sweat. This is especially true of children during the hot summer months.

Dr. R. L. Wall (Winston-Salem): That point is well taken. Are there any other questions?

Dr. W. A. Hamer (Charlotte): I would like to ask Dr. Ausherman if he sees all his patients the night before the operation or early the next morning, or if he has someone else from the department to see them?

Dr. Ausherman: We are talking here of what is ideal, and what is practical. Ideally, I think every patient should be seen preoperatively. When there is only one anesthesiologist in a department and the rest of the staff consists of nurse-anesthetists, however, it is impossible for this physician to see every patient the night before the operation. However, if you work in one hospital and are willing to spend from an hour to an hour and a half, you can see between 10 and 15 patients. You go in the patient's room, talk to him, and at a glance you can learn a great deal. By reviewing his chart you can get an idea of the problems with which you will be confronted the next morning.

Dr. Wall: Dr. Ausherman is right on that point. It is ideal to see every patient and order the premedication, but a limited staff may make this unfeasible. At Baptist Hospital we have been sending the residents. In an unusual case, the surgeon sends a consultation slip. We then see the patient, talk to the surgeon, and order the premedication and also the agents and methods to be used. Later on we hope to see all the patients before an operation, but up to this time we haven't succeeded.

Dr. Richard Spencer (Greensboro): I am in a relatively new hospital where our schedule includes between 8 and 14 patients a day; I see them all. As Dr. Ausherman tells you, you can find out a great deal about a patient in a short time. Usually, after a certain amount of practice, your eye will pick up any gross abnormalities, and you know whether or not you need to spend more time in evaluation. I judge an average of 2 patients a day. I spend perhaps an additional 15 or 20 minutes either talking with the patient or going over his chart, but in the majority of cases you can tell at a glance if the patient is healthy. In the morning the nurse will check the blood, the urine, and the diagnosis, and no additional time is required.

Dr. Kenneth Sugioka (Chapel Hill): I think one can overdo premedication, especially with the tonsillectomies performed under open drop ether. I am sure you all have had this experience: The patient is a heavily sedated child. He comes to the operating room, receives ether for five minutes, and stops breathing. An endotracheal tube provides complete control of the airway. You encounter more trouble with the patient who refuses to breathe because of Demerol sedation. I worked with a surgeon who performed all our tonsillectomies with the open drop method, and because of that fact I completely dropped Demerol from my preoperative medication of children.

Dr. Spencer: I have seen the same difficulty in Children's Hospital in Boston, where patients cannot be aroused before a tonsillectomy. These patients stop breathing before their eyes dilate, making surgery difficult. I think one should avoid psychic trauma in children. They may be given a barbiturate, which permits them to be aroused by a word or a touch, and then drop right off to sleep again. I have done this with two of my own children, and they have no recollection of going to the operating room. I think this type of premedication is ideal for children, because it does away with psychic trauma without danger.

Early North Carolina Medicine

Smallpox in North Carolina

DOROTHY LONG*

CHAPEL HILL

Although there were doubtless other epidemics of smallpox in North Carolina which caused more fatalities, and perhaps some which were of more importance historically, the epidemic receiving most attention was an outbreak of the disease in Tarboro in 1821 which resulted in a congressional investigation and some nationwide publicity. This episode will be described in some detail after a brief review of the earlier history of smallpox in the state.

Early History

There are scattered references to smallpox in almost every volume of the colonial *Records*, but the first extensive discussion of the disease occurs in the letters of Governor Arthur Dobbs, who reported that great numbers of the Cherokee and Catawba Indians died from it in 1760. In April of that year he wrote to the secretary of the Board of Trade, "I hear there are about 100 Catawba warriors who have returned to the town, out of 260 they had when they dispersed on acct. of smallpox."⁽¹⁾ Apparently the disease continued to harass the tribes, as two years later the governor said that the Catawbias, who had been a friendly tribe, had moved to South Carolina, their numbers having been reduced from 300 warriors to 60, with a proportionate number of old men, women, and children⁽²⁾. The Indians were not the only sufferers, however, as in 1759 the colonial assembly granted extra time to the settlers in Halifax to make good their claims to land there, because "the small pox have raged in the said town for many months past, whereby many persons have been prevented from saving their lots by building houses on them."⁽³⁾

The *Records* mention early attempts to control the spread of the disease, first by quarantine, as in 1738, when a Negro man with smallpox was brought into Wilmington on a ship from Charleston. The patient was ordered confined to the house in which he was then staying, the two men who were re-

*Reference Librarian, Division of Health Affairs Library, University of North Carolina, North Carolina Memorial Hospital, Chapel Hill.

sponsible for his having come were not to go out on any pretext, and the master of the ship was to take it two miles up the Black River" and for three weeks to have no intercourse with the inhabitants."⁽⁴⁾ There were several attempts to establish a permanent hospital, or "pest house," for smallpox victims, as in 1764, when Governor Dobbs, fearing that an epidemic in Boston might spread to the coastal towns of this region, suggested that a house on the Cape Fear be set aside for this purpose, and that New Hanover, Brunswick, and Bladen counties be taxed for its upkeep. However, this proposal was rejected by the colonial assembly⁽⁵⁾.

Vaccination

I have not been able to find when it was first used in North Carolina, but the practice of inoculation seems to have been fairly well known in the pre-Revolutionary period. In the court minutes of August, 1759, a witness was summoned to answer questions concerning Dr. Andrew Scott's sending to him for "some of the Small Pox Skabbs in a vial,"⁽⁶⁾ which suggests that Dr. Scott may have been inoculating patients. The practice gradually became more acceptable, but opposition to it continued for many years. In 1779, when smallpox spread in Salem after a company of cavalry from Pulaski's Legion had spent four days there and the community doctor planned to begin inoculating the people of the town, threats were received from neighboring villages, saying that Salem would be burned if this plan were carried out⁽⁷⁾.

Troop movements and an increase of travel during the war encouraged the dissemination of any infection, so that we find records of epidemics of various diseases during the Revolutionary period. Governor Caswell, in 1779, mentioned in a letter "the raging of the smallpox in the town of New Bern,"⁽⁸⁾ and there were serious outbreaks in Hillsboro and Halifax in 1781. Washington ordered that the troops be inoculated, and special places were designated as inoculation hospitals, but evidently not all of the soldiers were reached by this program. Writing of his experience in caring for prisoners in a British camp where he had been sent to attend the wounded, Dr. Hugh Williamson reported more deaths from small pox than from wounds, and complained of the

difficulty he had in securing from Cornwallis permission to inoculate the men who had not had the disease⁽⁹⁾.

Shortly after the publication of Jenner's work, a few North Carolina physicians began to encourage vaccination. One of the first of these was Dr. Calvin Jones, who was at that time secretary of the state medical society. He had been an advocate of inoculation, but in the *Raleigh Register* of April 14, 1801, he announced, "It is the hope of seeing the Vaccine disease substituted for the smallpox, that alone induces me to decline the inoculation." His discussion of vaccination interested, among others, the Moravians of Salem. On April 21, 1801, the Salem minutes report:

In Bethlehem they are inoculating against the smallpox. This disease has not been among us for fifteen years and it is time that something should be done for our young people who have grown up since then. A new kind of smallpox has recently been discovered in Europe, in which the worst features of this disease are almost entirely absent. In the last newspaper, Dr. Calvin Jones, of this state, announces that he hopes to receive this kind of smallpox, which is called cowpox, and offers to inoculate with it. It will be well to inform our members of his description of this new illness.

Some time later, a meeting of the parents was held, and

there was discussion of the inoculation with cowpox of our children and young people who have not had the ordinary smallpox . . . First, examples were given of what had been done with it in various parts of Europe: that it is a mild disease and not dangerous, and there are but few cases in which a person who has been inoculated with cowpox contracts smallpox. Here in America it has been used for some time, and it can be seen plainly that it is a preventive against ordinary smallpox . . . The matter was fully discussed, and it was pointed out that cowpox was not contagious and could be produced only by inoculation, so there was no danger of its being taken by children whose parents did not wish them to have it . . . ⁽¹¹⁾

Evidently most of the parents were convinced of the desirability of vaccination, as the Salem memorabilia for 1802 records that

about eighty persons, elder and younger, were inoculated by Dr. Vierling [Samuel Vierling was at that time the doctor in Salem] with cowpox. Most of them recovered easily and successfully, and a number had no illness whatever. If this kind of pox proves to be a sure and lasting preventive against the common smallpox, as experience seems more and more to attest, we cannot thank our Lord enough that so large a number of our children and youth have had the disease so easily.⁽¹²⁾

The Tarboro Incident

Though it had for some time its opponents and detractors, vaccination soon became well known and widely accepted. The difficulty of supplying vaccine, especially when threatened outbreaks of smallpox caused a sudden demand for large quantities, resulted in the setting up of several vaccine institutions. One of these, known as the National Vaccine Institution, was established by Dr. James Smith of Baltimore. He had attempted without success to get government support for his project; however, in 1813 Congress had passed "An act to encourage vaccination," which authorized the president "to appoint an agent to preserve the genuine vaccine matter, and to furnish the same to any citizen of the United States, whenever it may be applied for, through the medium of the post office," and which granted the vaccine agent franking privileges for letters and packages containing vaccine or relating to the practice of vaccination. Under this law, President Madison had appointed Dr. Smith as national vaccine agent. Dr. Smith later began appointing deputy vaccine agents, one of whom was Dr. John E. Ward, of Tarboro, North Carolina.

Early in November, 1821, Dr. Smith sent to Dr. Ward a letter of instruction and what he thought was some vaccine. Dr. Ward used the material in vaccinating a number of people in the community and soon realized that it produced an illness like smallpox itself. On December 29, 1821, he wrote Dr. Smith giving this information. His letter and other correspondence relating to the affair were reprinted in the *Vaccine Inquirer*, which Dr. Smith began to publish while an investigation of the incident was still in progress. Other letters from Dr. Ward, and from Dr. Benjamin Hunter, also of Tarboro, reported on the progress of the epidemic, which resulted in at least 10 deaths. Writing in January of 1822, Dr. Ward told of the disagreement among local doctors, at first, as to whether smallpox was really present, and of his prompt use of vaccine secured from other sources. He also asked for further information about the material sent him, saying,

In consequence of this disease I have been much abused; have been charged by some of introducing it from lucrative motives; and in addition to which and worst of all, am accused

of having received matter marked with the Latin word for smallpox; and this has been magnified until it has become a serious charge. It originated in consequence of noticing the mark at the bottom of the printed sheet of established regulations of the general institution, etc., Whitford.'

In my first communication to the Commissioners, I sent all the papers I had received from you at the time I received the impure matter, requesting it as a favor that they should read them, in order that they might know in what manner this disease had been introduced. Some of them noticed the mark and requested to know what it meant, but was quite ignorant of it until I explained the meaning of variolous, supposing 'variol.' an abbreviation of the former word. That I supposed it some private mark best known to yourself; that I recollected, if I was not mistaken, to have seen a similar mark on papers you had before sent me . . . (13)

Before receiving this letter, Dr. Smith had hastily published an attempted explanation of the affair, suggesting such possibilities as that some smallpox contagion had clung to his person as he prepared the vaccine (the disease was at that time epidemic in Baltimore), that the genuine cowpox might be so nearly like smallpox that when the latter is prevalent it "intermixes with the vaccine matter by a natural process," that the same person might be a carrier of both smallpox and cowpox, or that cowpox might so change that it became capable of producing smallpox⁽¹⁴⁾.

Soon after the letter containing these theories appeared in the *Baltimore American*, Dr. Smith realized, from the information sent him by Dr. Ward and others, what had really happened. The supposed vaccine was not vaccine at all, but smallpox scabs which had been sent by some mistake to Dr. Ward. Smith immediately sent this information to the House of Representatives, which had appointed a committee to consider the occurrence and decide whether it would be wise to repeal or modify the law of 1813. Late in February, 1822, this committee reported that, "As the vaccine agent has since ascertained and acknowledged, that it was the genuine smallpox matter that he had sent to North Carolina, through his own mistake," no change in the law was necessary⁽¹⁵⁾.

In the meantime the matter had received much newspaper publicity, including an account in the *Raleigh Register* by Dr. Ward, and had continued to be the subject of an acrimonious correspondence among the vari-

ous physicians involved. Debate in Congress also continued, and another committee, whose chairman was Hutchins G. Burton of North Carolina, was appointed to reconsider the question of repealing the law concerning vaccination. This committee considered such questions as the efficacy of vaccination, the possibility that the National Vaccine Institute constituted a monopoly, and the relative responsibility of national and local governments in encouraging vaccination. Heated accusations were made by both sides, one member going so far as to doubt that the smallpox had been sent to North Carolina by Dr. Smith; he thought it more likely to have been introduced by the local doctors, "whose interest it was to have the people as sick as they could be."⁽¹⁶⁾ One of the calmer members remarked that, "However intelligent this House might be, it could hardly be supposed to be accurately versed in medical science."⁽¹⁷⁾ Dr. Smith's appointment was revoked in April, and the law encouraging vaccination was repealed in May of 1822. For several years, however, Dr. Smith, in an effort to clear himself of charges of negligence, continued to appeal to Congress for vindication. In this he succeeded to some extent, though a committee of the Nineteenth Congress concluded that, "There yet remains some obscurity as to the facts of the case."⁽¹⁸⁾ An interesting account of Dr. Smith's career, especially of his efforts to encourage vaccination, has been written by Bell⁽¹⁹⁾.

Dr. Thomas Fanning Ward

At least one other individual should be mentioned in connection with the history of smallpox in North Carolina — Dr. Thomas Fanning Wood, who practiced in Wilmington after the Civil War. He returned from military service in 1865 to find an epidemic of smallpox in the town, and helped to organize the city smallpox hospital in which more than 1,300 patients were treated. In his report of July, 1866, covering a period beginning with the preceding October, Dr. Wood recorded 117 deaths from 740 cases, and appended this note: "The only plan, which is at all possible, for the prevention of a prevalence of this disease in the future, is compulsory vaccination and re-vaccination."⁽²⁰⁾ Dr. Wood was one of the founders of the state board of health and was its sec-

retary for six years. From 1878 until his death in 1892 he was also editor in chief of the *Carolina Medical Journal*, the second of the journals sponsored by the state medical society. In both of these positions, Dr. Wood constantly urged the necessity of vaccination for the control of smallpox, writing a number of articles on the subject and answering many requests for the quarantine of cases of the disease with the statement that such a regulation was not advisable, vaccine being simpler and far more effective in controlling its spread. Not until 1911, however, did the legislature finally pass an effective regulation for compulsory vaccination.

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Test for Anginal Pain

When a patient is observed while he actually has chest pain and the carotid sinus is massaged for a few seconds and the heart slows considerably, if the pain is anginal in character it will disappear entirely or wane perceptibly within several seconds. In performing the test the patient is first asked whether he is having his customary discomfort at that very moment. Then, when slowing has been produced by massage of the right or left carotid sinus, he is immediately asked whether the pain is worse. He is not asked whether it is better, as that would be a leading question. In fact, he is actually given a misleading question. If his reply is that the pain is gone or is letting up, the diagnosis of angina is fairly certain. If no significant slowing is obtained, no conclusion whatever can be drawn. The pain then may or may not be anginal. It is amazing how promptly the discomfort can be lessened by this maneuver. The pain may remain absent and that particular episode be over, or after a brief temporary relief it may return as the heart resumes its previous slightly rapid rate. I feel certain that the test may help in some cases to identify the coronary origin of discomforts in the chest before the condition takes on its more classic form, with its specific relations to effort. It has proved to be an additional diagnostic aid of practical use.—S.A. Levine: Pitfalls in the Care of Cardiacs, Ann. Int. Med. 42: 1272 (June) 1955.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

OCTOBER, 1955

NO APPEASEMENT

In August the Supreme Court of North Carolina rendered a very important decision when it upheld the action of Judge Walter E. Crissman in dismissing the suit brought against Dr. Howard Bradshaw, professor of surgery at Bowman Gray. Thereby hangs a tale with a moral.

The plaintiff, an auto mechanic from Kingsport, Tennessee, had been struck in the chest by a steel fragment. X-rays of the chest showed the fragment lodged in the upper part of the left lung. His local physician then referred him to Dr. Bradshaw. At the North Carolina Baptist Hospital x-ray again showed a small irregular metallic body about 1 by 0.5 cm. in size in the apex of the upper portion of the left lung. Although no obvious symptoms were present, the patient

wanted the fragment removed, because he would be inclined to blame anything that happened in the future on this previous body. Since the fragment had probably nicked the pleura, Dr. Bradshaw decided to operate. At operation it was found that the pleura had been pierced, but the search for the elusive fragment was unsuccessful, even with the electric magnet. The patient was told frankly that the fragment had not been removed, but that it would not be likely to give any further trouble. He was not seen after he was discharged from the hospital, although he had been asked to come back, and had been requested by letter to report on his condition.

Dr. Bradshaw was never paid for his services and heard no more from the patient until two years later, when a lawyer—who had had previous experience in trailing an ambulance elsewhere—sought to have him settle out of court a claim for damages. He alleged that the operation had resulted in permanent weakness of the arm.

Dr. Bradshaw refused to compromise, and when the case came to the jury Judge Crissman dismissed the suit on the grounds that there had been no proof of negligence. The plaintiff then appealed to the North Carolina Supreme Court, and that body, as already stated, upheld Judge Crissman's action.

In choosing to fight the suit Dr. Bradshaw has set a good example for other doctors who may be sued. The easy way out is to pay a comparatively small sum as hush money—but this is really a policy of appeasement. A few more such refusals to compromise unjust suits will do much to discourage lawyers from looking upon doctors as easy marks.

* * *

INTERLINGUA

The time was when Latin was the universal language of scholars the world over. When William Harvey in 1628 published his famous work on the circulation of the blood, he wrote in Latin. Fortunately for most modern medical historians, an English translation has been available.

Now that Latin has such a small place in modern education, the need for a common means of communication among scientists has been felt more and more.

An editorial by Dr. Johns Lansbury in the *Annals of Internal Medicine* for July (pp. 217-221) tells of the attempt to meet the need. The editorial says in part:

"In 1919 the International Research Council stimulated the American, British, French, and Italian Societies for the Advancement of Science to appoint committees to investigate the possibility of supplying a neutral scientific language for use in international scientific communications. The project languished except in the U.S.A., where, under the direction of the International Auxiliary Language Association, a systematic exploration of the problem was begun in 1924. Numerous linguists, philologists, and scholars in related fields conducted a painstaking study of the problem from 1924 on. In 1951 a dictionary of approximately 27,000 standardized international words was published with a grammar by means of which the vocabulary could be operated.

"This work is unique in the field of interlinguistics since it is based on meticulously exact scholarship from beginning to end. The resulting vocabulary contains nothing artificial or invented, and therefore represents the recovery of an already existing language and *not* the invention of a new one.

"A word is eligible for inclusion in the vocabulary of Interlingua if it is present in three of the four languages under scrutiny (English, French, Italian and Spanish-Portuguese). Where the form of the word is identical it is adopted without change. For instance, the English word "present" is identical in all five languages under consideration and appears in Interlingua as "presente." However, where the form of a word varies from language to language, the "nearest documented or hypothetical ancestor" of the word is chosen. Thus, for English "school," where the following national forms also exist: école, scuola, escuela and escola, the Latin "schola" is automatically selected. Its meaning is clear to us from such words as "scholarship," "scholastic," "scholar," etc.

"*Interlingua Grammar*: Only those grammatical features common to all the source languages are retained. This automatically reduces the grammar to the minimum which is found in English. Thus, there is no agree-

ment of adjectives with nouns, no grammatical gender, no subjunctive, and no inflected conjugations. Word order follows the general pattern of the Romance languages.

"*The Qualities in Interlingua*: Interlingua has the general appearance of a natural Romance language freed from dialectal peculiarities . . .

"English speakers with normal linguistic ability and training do almost equally well when reading technical material in their own field. The same holds true for speakers of German. Of course this ease of comprehension depends on the previous knowledge of language which all well educated persons possess. Unfortunately there are a few intelligent and well educated people who seem to be "linguistic cripples" and who have difficulty in expressing themselves clearly even in their own mother tongue. To these neither Interlingua nor any foreign language will appeal.

"*The Range of Interlingua*: Interlingua is comprehensible to the intellectual leadership of approximately half a billion people . . .

"No other language, whether natural or artificial, possesses anything like this range of comprehensibility. Thus, if an Interlingua text were translated into English, Spanish, Portuguese, Italian, German, or any other national language, its range of comprehensibility would immediately be put to practical use in the field of mass-communication.

"*The Current Application of Interlingua*: Interlingua seeks only to supplement whatever devices already exist to overcome language barriers. It does not wish to encroach on the use of national languages where these have an established function in international communications. It welcomes the I.B.M. multiple translation system at scientific congresses and regards itself as complementary to it at the level of the written word.

"Since its introduction three years ago, Interlingua has found a useful role in scientific publications. Under the direction of Science Service, a monthly bulletin, "Scientia International," is now entering its third year of publication. "Spectroscopia Molecular" is another bulletin, devoted to a highly specialized field. The following medical

journals are either using, or plan to use Interlingua translations of summaries of their original articles: *American Heart Journal*, *American Journal of the Medical Sciences*, *American Journal of Psychotherapy*, *Annals of Internal Medicine*, *Blood*, *Circulation*, *Clinical Orthopedics*, *Archivos Peruanos de Patologia y Clinica*, *Diabetes*, *Journal of Dental Medicine*, *Pediatrics* and the *Quarterly Bulletin of the Seaview Hospital*. Numerous other journals in this country and in Europe and South America appear to be interested.

"Reviewing the above, it seems to us that Interlingua has found a useful place in the medical journals of the western world. We think it is here to stay. How far it will go to recapture the function which Latin exercised in Harvey's day remains to be seen. We at least seem to have a working model of a new form of Latin which will aid in the circulation of medical information. American doctors would welcome the introduction of Interlingua summaries in European and South American Medical Journals."

* * *

CORTISONE VERSUS ASPIRIN

The first article in the *British Medical Journal* for September 17 is an intriguing comparison of cortisone and aspirin in the treatment of early rheumatoid arthritis. It is the second report of the Joint Committee of the Medical Research Council and Nuffield Foundation. The first report⁽¹⁾ gave the first year's experience of this committee with 61 adult patients admitted to six medical centers in England and Scotland. Thirty were selected at random for treatment with cortisone, 31 with aspirin. Three in the aspirin group were lost sight of, but the remaining 28 and the 30 cortisone-treated patients have been followed ever since. At the end of the first year the results attained in the two groups were almost identical. At the end of the second year, the two groups continued to show even more uniformity in the results attained. The Committee concludes that "At the end of two years, . . . it appears that for practical purposes there has been remarkably little to choose between cortisone and aspirin in the management of this group of patients."

The two reports of this committee repre-

sent a vast amount of intelligent study by experts of the relative merits of the old standby aspirin, and the comparative newcomer, cortisone. Certainly the results obtained should give pause to those who would abandon a time-tried, relatively safe, and quite cheap remedy for an admittedly experimental, potentially dangerous, and expensive new product.

The editor of the *British Medical Journal* comments:

All specifics introduced for its treatment so far have passed through three stages: the stage of enthusiastic welcome, the longer stage of practical large-scale use and gradual waning of enthusiasm, and then a final phase where such measures are used really only for want of anything better and until the next new substance comes along. Thus, although vaccine treatment superseded spa treatment and mud packs, gold treatment later superseded vaccines, and cortisone superseded gold, to-day throughout the world cortisone, vaccine, gold, aspirin, and physiotherapy are used side by side. This process is largely one of fashion: objective assessment demands more time and care than can easily be spared by the busy practitioner. Thus a heavy responsibility rests with those to whom he looks for guidance.

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* * *

HORDERISMS

One of the world's greatest physicians was the late Lord Horder of England. Although he was physician to the royal family, he never lost the common touch. In a number of successive issues the *British Medical Journal* has had material about this great man. It is doubtful if it ever published more tributes from more men in all walks of life than were paid Lord Horder.

One of his former house physicians recalled a number of his wise and witty sayings, which became known as "Horderisms." These are worth passing on to readers of this JOURNAL.

"Make a friend of your doctor, but don't make a doctor of your friend." "I would treat Beelzebub himself if he came into my consulting-room." "The preservation of health . . . depends on temperance and a quiet mind." "It is the duty of a doctor to prolong life. It is not his duty to prolong the act of dying." "Someone must preserve his poise, and, if the clinician does not, no one does." "Successful medicine is understanding touched with sympathy." On his eighty-third birthday he said: "The more I get to know men the more I like them, for to understand them is to love them."

PRESIDENT'S MESSAGE

DOCTORS AND PUBLIC OPINION

Are the doctors in the public doghouse? Are they arrogant? Are they indifferent to the patient's welfare? Do they charge too much?

The Minneapolis Sunday *Tribune* set out to find the answer to these questions. The newspaper, which has more than half a million circulation, conducted a survey covering the entire state of Minnesota, and found that the people on the whole disagreed vigorously with critics who lash out everlastingly at the doctors.

The survey revealed that the medical profession in the state is well regarded; two-thirds of the people considered the doctor's fees reasonable. More than four out of five were satisfied that the doctors take a personal interest in their patients and their troubles. Most of them were confident that if they called a doctor to make a home visit, he would come. Eighty-seven per cent believed that doctors are better trained now than they have ever been before.

The following statistics released from the Department of Labor in December, 1954, and reported in the *United States News and World Report* for that month, will be helpful to physicians in counteracting the frequently heard charge, that "physicians are no better than gangsters demanding ransom for their professional services, as does a kidnapper."

The following is not a brag of the physician nor a boast of free enterprise: Government experts attribute most of the rise in hospital expenses today to higher charges resulting from better pay scales for hospital workers and from the higher cost of food. Physicians, on the other hand, are getting a somewhat smaller share of the nation's private medical outlay. This finding runs counter to the criticism of physicians' fees today.

In 1930 physicians' fees accounted for 30 per cent of the out-of-pocket cost; now they constitute only 29 per cent. Physicians' fees tend to stay fairly constant for periods of years, yet their expenses for taking care of patients go up and up, as do all other consumer expenditures. Today many physicians

are charging the same for office calls and sickroom visits as they did shortly after the war.

Medical care is costing the people a total of 12.4 billion dollars per year, of which 2.1 billion is met through health insurance. Only four billion of the 12.4 billion dollars goes to the physicians in the United States. Three fourths of the total goes for other medical expenses. The American public spends many thousands times more than this on patent medicines, quacks, tobacco, alcohol, cosmetics, automobiles, theater tickets, and other non-essential commodities and luxuries.

The average person today pays only 4 per cent of income for medical care, as compared to 31 per cent for food, 12 per cent for clothing, and 11 per cent for housing.

Since World War II out-of-pocket expenditures for hospital costs have risen 161 per cent. Physicians' fees during the same interval have risen 45 per cent. This is still about 4 per cent of the income of those gainfully employed, as it was in 1930. From this it will be seen that medical fees have not risen as fast as the consumers' price index; that personal consumer expenditures for medical care continue to be a little more than 4 per cent of all family personal consumer expense; that physicians' incomes, on the average, have increased since 1929 at almost precisely the same percentage rate as has the income of all gainfully employed people.

The Economic Research Department of the U. S. Chamber of Commerce in its pamphlet "Free Health Care for Everyone" states that "Americans spend more money for recreation alone than they do for medical care." This supports my belief that the people not only can pay for medical care, but that they want other things more than they do good medical care. There is no such thing as free medical care—except that given away by the physicians. Somebody, of course, has to pay for all other medical care.

Here are some figures from the Department of Commerce on the Consumer Expenditures for 1953. Ten billion dollars for

medical care and more than eleven billion dollars for recreation. Five billion, three hundred million dollars for tobacco. Five billion, nine hundred and eight million dollars for kitchen and household goods.

The Los Angeles County Medical Association in its September 1 Bulletin published some very interesting and consoling facts obtained by their public opinion survey question, "How does the public rate you, Doctor." The result of this survey shows that (1) The public generally likes doctors. (2) Doctors as a group enjoy a position of confidence and respect. (3) The public is not dissatisfied with physicians and their services today.

One of the men questioned replied as follows: "Doctors do not invent sickness and misery. I think they are doing their best to do a job that needs to be done. They are in a tough spot to have good public relations. Their customers just do not want to buy what they are selling at any price. Even if doctors could fix broken legs for a dime a dozen, no one would want to have one. Nobody likes to be sick. And many people, if they get sick, get sore and take it out on the doctor." This same survey reveals many other important facts and I urge every physician to read the full report.

Much of our criticism is purely political propaganda for compulsory health insurance and socialization of medicine. The growing pressure to put government in medicine makes just as much sense as to put government in the automobile business, to buy those who do not have a car a Cadillac at the tax payers' expense.

Physicians may justly lay claim to and be proud of the following facts: American physicians make an annual donation to the American public of five billion dollars of free medical care or reduced medical fees to those in poor circumstances. A survey in New Hampshire showed that four dollars of free medical care is given to the public every minute. The average doctor spends 12 per cent of his working hours in charity. For the average physician this amounts to a donation of \$3,425.00 a year in free medical services. Some millions more are given to charity, churches, medical schools, hospitals, and other worthy community projects by direct donations from the physicians. No other group including business, professions, or even the clergy come any-

where near meeting this great philanthropic contribution to humanity.

Good doctors have nothing to fear or be ashamed of when their day's work is done. When it comes to making a choice between dollars and the health of our citizens, we should and will choose health every time.

JAMES P. ROUSSEAU, M.D.

Committees and Organizations

A REVIEW OF THE FIRST 1000 CONSECUTIVE MATERNAL DEATHS IN NORTH CAROLINA

Part V Cardiac Conditions

JAMES F. DONNELLY, M.D.*

WINSTON-SALEM

Among the 1,000 maternal deaths studied by the Committee on Maternal Welfare, 45, or 4.5 per cent, were considered to be due to heart disease primarily. (Originally 46 deaths due to heart disease were listed; however, one of these was reclassified as toxemia.)

The type of heart disease was rheumatic in almost all cases, as can be seen in table 1. The 4 cases of arteriosclerotic heart disease were in patients more than 40 years of age who were without hypertension. The immediate cause of death in 30 of the patients was congestive heart failure, with cerebral embolism occurring in 7 cases (3 of these patients were known to have subacute bacterial endocarditis), coronary thrombosis in 3 cases, and pneumonia in 2 cases. In 5 cases it was impossible to determine the immediate cause of death from the available data.

As in the maternal deaths from other primary causes, inadequacy of prenatal care was an outstanding feature. Ten of the patients had no prenatal care whatsoever, and 24 received what was considered grossly inadequate care. Thus of the 45 patients in this group, only 11 were classed as having adequate prenatal care.

Although the operative incidence of 27 per cent appears high, the procedures consisted largely of low forceps deliveries. The profession certainly is to be congratulated on the fact that only 2 cesarean sections were done in the entire group. One of these

*Chairman of the Committee on Maternal Welfare of the Medical Society of the State of North Carolina.

Table 1
Type of Heart Disease

	No.	Percentage
Rheumatic	37	82
Congenital	3	7
Arteriosclerotic	4	9
Syphilis	1	2

was done at 6 months' gestation for chronic congestive failure, and perhaps should be considered a therapeutic interruption. There were only 3 unwarranted operative procedures in the entire group. One was a manual dilatation of the cervix, another a version and extraction without obstetric indication, and the third a cesarean section. In none of these 3 cases was immediate delivery imperative.

Eight of the patients died during the antepartum period, 1 during labor, and the majority (36) in the postpartum period. The antepartum deaths were fairly well distributed in time, although 5 occurred in the last trimester of pregnancy. In the postpartum period, 10 patients died within the first 24 hours after delivery and an additional 13 within 2 weeks.

It was of interest that 23 of the 45 patients presented other complications which were considered significant. These included postpartum hemorrhage, severe anemia, subacute bacterial endocarditis, syphilis, recurrent pyelonephritis, psychosis, premature separation of the placenta, thyroid adenoma, and hepatic necrosis. There were 7 cases of toxemia, 6 mild and 1 severe.

In a previous review of these records Burt⁽¹⁾ pointed out that the incidence of toxemia was higher among the patients with rheumatic heart disease than expected. The incidence of severe anemia also seemed higher, although the data were not sufficient to be certain. Less than one third of these patients received the benefit of consultation. In this group of cases, however, the majority of consultants were physicians specializing in heart disease.

In respect to the treatment, some very striking features appeared. Among the 30 patients who died from acute congestive failure, 11 received digitalis, 4 oxygen, 2 had diuretics, and none were subjected to venesection. In consideration of the over-all treatment, it was apparent to the committee that 85 per cent of the patients had either

Table 2
Responsibility for Death

	No. Cases	Percentage
Physician	19	42
Patient	23	51
Midwife	2	5
Nonpreventable	1	2

no treatment whatsoever, or that the treatment was grossly inadequate.

Preventable Deaths

It was the opinion of the committee that 44, or all but one, of the deaths were preventable. Table 2 reveals that neglect on the part of the patient was considered the major preventable factor in 51 per cent of the cases. The physician was responsible in 42 per cent. In assigning the responsibility in this fashion it was necessary to determine the factor considered to be most important; the individual physician, patient, or midwife who appeared to be primarily responsible. In nearly all of the cases errors were made by both the patient and the physician. Furthermore, the physician or patient was often responsible for more than one error.

Errors of physicians

Some of the common failings on the part of the physicians are listed in table 3. Thirty patients died of acute congestive failure, none of whom were subjected to venesection, and only 4 received oxygen therapy. In all of these fatalities sufficient time was available to institute such treatment. In 11 cases a cardiac lesion was not diagnosed on the initial examination and was not discovered until the patient was in failure. Since in most cases the physician stated that a physical examination had been done, it would appear logical to assume that the cardiac murmurs were not heard or that they were dismissed as functional in nature. In 9 additional cases the diagnosis of rheumatic heart disease was made; however, no special

Table 3
Preventable Factors Attributed to Physician

	No.
No phlebotomy	30
No oxygen	26
Error in diagnosis	11
Inadequate management (general)	9
Toxemia not treated	4
Choice of anesthetic	3
Choice of delivery	3
Referral failure	1

Table 4
Preventable Factors Attributed to Patient

	No.
Failure to seek prenatal care	14
Refusal sterilization and/or abortion.....	5
Refusal to follow medical advice.....	4

treatment such as additional rest, avoidance of infection, and dietary restrictions were advised. Included in this group also were some cases in which the treatment seemed to follow no particular plan even though the patients were critically ill. Many of them were not even hospitalized.

The incidence of toxemia was definitely higher among these patients than in patients without cardiac disease. Of the 7 patients who presented toxemia as a complication, 4 had no treatment for the toxemia whatsoever. In 3 cases the committee considered the choice of anesthetic agent unwise, as all 3 patients were known to have severe cardiac lesions prior to the use of the anesthetic agent. Nitrous oxide was involved twice and chloroform once.

There appeared to be 3 unnecessary traumatic deliveries. One was a forceps delivery with manual dilatation of the cervix, another was version and extraction, and the third was a cesarean section. There was no complication other than the cardiac disease, and in none of the patients did there appear to be any necessity for immediate delivery.

The referral failure occurred in one of the Public Health Clinics. When an abnormality is encountered in the clinics, the custom is to advise the patient to see her private physician. The patient is then dismissed from clinic care. No effort is made to establish contact with the physician or to assist

the patient in any way to get further medical care.

Errors of patients

As far as the patient's responsibility was concerned, the preventable factors were fewer in number. Fourteen patients failed to seek medical care until their condition was critical. Even though they finally received medical care, their condition was so grave that the physician was absolved of all responsibility (table 4).

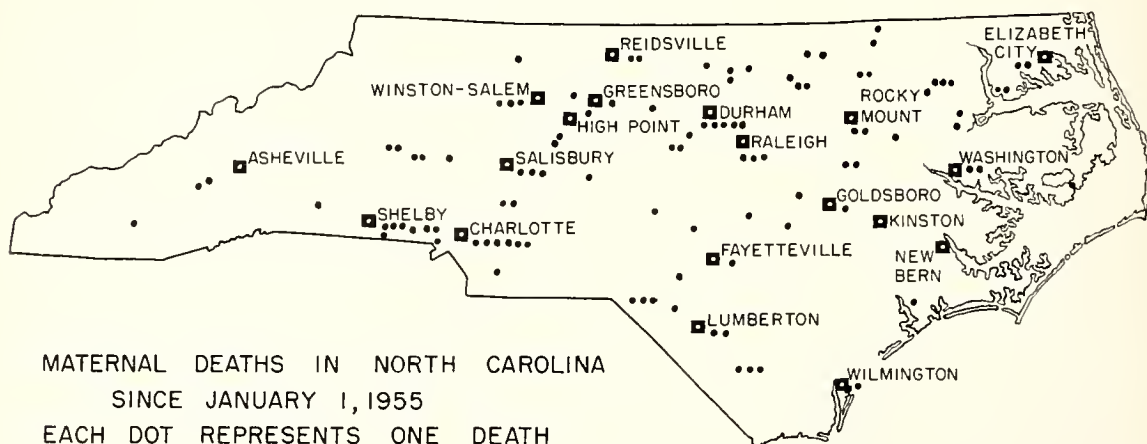
Sterilization or therapeutic abortion was advised and refused in 5 cases. Four other patients definitely refused to follow the medical advice given to them.

Deliveries by midwives

The midwife was considered the responsible individual in 2 cases. In spite of the fact that one of the patients had not had any prenatal care, a midwife performed the delivery. The other patient had attended a clinic and was refused a permit for a midwife delivery. The midwife, however, assured the patient and her husband that a home delivery would be perfectly satisfactory. The patient whose death was considered unpreventable had a known congenital heart lesion without antecedent history of difficulty. She progressed to term under a carefully controlled regimen, when congestive failure suddenly developed. She survived the first attack, but had three or four episodes of failure within the next 18 hours and succumbed in spite of all therapy.

Conclusion

Although heart disease is not one of the major causes of maternal death in North



Carolina at the present time, it will probably become one of the leading factors in the near future. In the better clinics in the country heart disease and anesthetic accidents are major causes of maternal deaths, toxemia and hemorrhage having been all but eliminated.

References

1. Burt, L., Donnelly, James F., and Fleming, S. P.: Acute Toxemia of Pregnancy Associated with Organic Heart Disease, *Am. J. Obst. & Gynec.* 68:529-539, 1954.

Most public health people believe today that good health cannot be forced upon individuals, but when they are educated to its advantages and its values, they work to secure its benefits for themselves, their families and their communities. Leroy E. Burney, M.D., *Am. J. of Pub. Health*, Feb., 1955.

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BULLETIN BOARD

COMING MEETINGS

Raleigh Academy of Medicine, Seventh Annual Medical and Surgical Association—Sir Walter Hotel, Raleigh, October 27.

North Carolina Society for Crippled Children and Adults—Selwyn Hotel, Charlotte, October 28 and 29.

Seventh District Medical Society meeting—Wadesboro, November 16.

University of North Carolina, Postgraduate Course on Trauma, Including Burns—Chapel Hill, November 17, 18; Postgraduate Program on General Surgery—Chapel Hill, November 21, 22; Postgraduate Course on Pediatrics in General Practice—Chapel Hill, Wednesday afternoons, through November 30.

Duke University School of Medicine Postgraduate Cruise—M.S. Stockholm, November 23–December 5.

United Cerebral Palsy, Sixth Annual Meeting—Hotel Statler, Boston, Massachusetts, November 11–13.

Southern Medical Association, Forty-Ninth Annual Meeting—Houston, Texas, November 14–17.

Association of Military Surgeons, Annual Meeting, Hotel Statler, Washington, D. C., November 7–9.

American College of Chest Physicians, Eighth Annual Postgraduate Course—New York City, November 14–18.

American Medical Association, Ninth Annual Clinical Meeting—Boston, Massachusetts, November 29–December 2.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Dr. G. P. Manire, an associate professor in the University of North Carolina Medical School, has been awarded a Fulbright Research Scholarship grant for the calendar year 1956. Dr. Manire who has been a member of the Department of Bacteriology since 1950, received his B.S. and M.S. degrees from North Texas State College and the Ph.D. degree from the University of California. During the term of his appointment he plans to do research on the nature of the toxic components and growth characteristics of influenza and other viruses at the Statens Seruminstitut in Copenhagen, Denmark. This institute is a center of biological production and research in Denmark.

Dr. Manire has recently received a two-year grant of \$15,342 from the U. S. Public Health Service which will enable him to continue his work on these viruses upon his return to Chapel Hill.

He will be accompanied to Europe by his wife and two children. They plan to arrive in Copenhagen about January 1, 1956, and will remain there for about one year.

* * *

Dr. Charles Flowers, associate professor of obstetrics and gynecology, was at Daytona Beach, Florida, September 12–14, where he addressed the Tri-State Obstetric-Pediatric Seminar on "Obstetrical Care in Rural Communities."

* * *

Dr. Leonard Palumbo, assistant professor of obstetrics and gynecology, attended the meeting of Southeastern Obstetrical and Gynecological Society in Memphis, Tennessee, September 16–18.

Dr. George C. Ham, Chief of Psychiatric Service, North Carolina Memorial Hospital, has announced the addition of 12 new psychiatric residents to the staff of the Department of Psychiatry of the University of North Carolina School of Medicine.

* * *

On August 15, 1955, Mr. James Franklin Lane joined the staff of the Psychiatric Research and Treatment Center of the University of North Carolina Memorial Hospital. He holds the position of Unit Manager of the Psychiatric Center, and his office is located in the new South Wing of Memorial Hospital.

An alumnus of the University of North Carolina, Mr. Lane is a native of Wilson, North Carolina, and before coming to Chapel Hill was a representative of the Occidental Life Insurance Company in Charlotte. He has served three years with the United States Air Force.

* * *

Dr. W. Grant Dahlstrom, director of Psychological Services at North Carolina Memorial Hospital, left August 26 to attend the National Training Conference in Clinical Psychology August 27-30, sponsored by the United States Public Health Service, in Palo Alto, California. He also attended the annual meetings of the American Psychological Association in San Francisco September 3-7, where he reported on some of his research on schizophrenia.

* * *

Dr. Lucie Jessner and Dr. James T. Proctor represented the Child Psychiatry Unit of the Psychiatric Center of the University of North Carolina at the Neuropsychiatric Institute, which was held in Princeton, New Jersey on September 21.

* * *

Postgraduate medical courses at Morganton and Asheville got under way September 21 and 22 and will continue through November 2 and 3. Guest speakers in this series will include: Dr. W. Proctor Harvey, assistant professor of medicine, Georgetown University Medical Center; Dr. Louis K. Diamond, associate professor of pediatrics, Harvard Medical School; Dr. Felda Hightower, assistant professor of surgery, and Dr. Harold Green, professor of physiology and pharmacology and associate in internal medicine, Bowman Gray School of Medicine.

* * *

The Department of Surgery will give a postgraduate course on Trauma, Including Burns, for general surgeons of the state and region on Thursday and Friday, November 17 and 18. A visiting speaker for the course will be Dr. David Bosworth, director of orthopaedic surgery at St. Luke's Hospital, New York City. The program, which will include lectures, panel discussions, case presentations, and ward rounds is designed to provide an intensive review of the principles of handling trauma, with particular reference to the usefulness and limitations of the many new developments which have an application to this field.

* * *

The following Weekly Postgraduate Course on Pediatrics in General Practice will be held each Wednesday afternoon at the University of North Carolina School of Medicine October 12 through November 30, 1955:

October 12—"Chronic Pulmonary Infections and Tuberculosis", Annie V. Scott, M.D., Visiting Professor of Pediatrics

October 19—"Diagnosis and Therapy of Acute Infections", Edward C. Curnen, M.D., Professor and Head of Department of Pediatrics



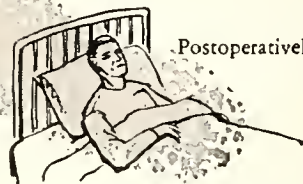
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October 26—"Common Surgical Problems in Pediatrics", Arthur H. London, M.D., Clinical Professor of Pediatrics

November 2—"Emotional and Behavior Problems", Harrie R. Chamberlin, M.D., Assistant Professor of Pediatrics

November 9—"Immunizations", Sidney S. Chipman, M.D., Clinical Professor of Pediatrics

November 16—"Evaluation of Growth", Judson J. Van Wyk, M.D., Assistant Professor of Pediatrics

November 23—"Convulsions and Other Neurological Problems", Harrie R. Chamberlin, M.D.

November 30—"The Tonsil and Adenoid Problem; Otitis Media", Nelson K. Ordway, M.D., Professor of Pediatrics

NORTH CAROLINA STATE BOARD OF HEALTH

The North Carolina State Board of Health has won a National Home Safety Award of Merit for "exceptional public service" in the prevention of home accidents during the year 1954-1955, Mr. Tom Fansler, director of Home Safety, National Safety Council, revealed in a letter to Dr. Charles M. Cameron, Jr., Accident Prevention Chief, on September 15. The award will be presented during the National Safety Congress at a luncheon in honor of the winners of Home Safety Awards in Chicago on October 19.

Mr. Fansler's letter concluded "Congratulations for your work to prevent accidents in the home, and best wishes for continued success in your home safety program."

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

Dr. Bayard Carter, Duke University physician, has been named president of the American Board of Obstetrics and Gynecology. Dr. Carter, professor and chairman of the Department of Obstetrics and gynecology, succeeds Dr. Walter Dannreuther of New York City, who has been president of the board for the last 25 years.

He is one of 12 doctors throughout the nation who comprise the board's Advisory Committee on Policy.

A Duke faculty member since 1931, Dr. Carter served as president of the American Academy of Obstetrics and Gynecology in 1953-1954, and he is also a past-president of the South Atlantic Obstetrical and Gynecological Society. In 1954 he was named an honorary Fellow of the Society of Obstetricians and Gynecologists of Canada, and he received the Algernon Sydney Sullivan award, given annually to a Duke faculty member for humanitarian service.

* * *

Dr. Lenox D. Baker and J. Leonard Goldner were guests speakers on a Duke University Medical Town Hall television program presented in September. This was the tenth in a series of public services features presented by Duke Medical School in cooperation with Station WTVD, Durham. They discussed the care of injuries from sports.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

Off to Boston!

Quaint old Boston with its crooked streets and historic landmarks familiar to every American schoolboy has much to offer physicians and their wives planning to attend the A.M.A.'s ninth annual Clinical Meeting November 29 to December 2. An outstanding scientific program covering all phases of medicine—including lectures, roundtable discus-

sions, color television and motion picture films—has been lined up for A.M.A. visitors. In the Scientific Exhibit leading authorities from all over the country will be on hand continuously throughout the four-day meeting to answer questions and discuss problems with doctors. The Technical Exhibition will feature the latest developments in equipment, books and pharmaceuticals.

This year's meeting promises to be one of the largest Clinical Sessions on record. Both the Scientific and Technical Exhibits will be held in the Mechanics Building, and the House of Delegates will meet at the Statler Hotel. Arrangements are being completed to make this session a worth-while postgraduate medical education "course." Plan now to attend.

* * *

A.M.A. Sponsors Mental Health Meeting

Methods for integrating effectively the techniques of psychiatry with general medical practice will be one of the topics of discussion at the second Conference of Mental Health Representatives of State Medical Associations. Sponsored by the A.M.A. Council on Mental Health, the meeting will be held November 18 and 19 at A.M.A. Headquarters, Chicago. One of the primary purposes of the meeting will be to exchange ideas on ways in which medical societies can implement and expand their mental health programs.

* * *

New Booklet On Indigent Care Plans

Current information on 18 representative state and local indigent care plans will be included in a booklet published this fall by the A.M.A.'s Council on Medical Service. To learn where organized indigent medical programs were operating successfully and to determine the characteristics of such programs, the Council's Committee on Indigent Care began a study in 1952 of 11 communities and seven states in various sections of the country. Early in its work the Committee developed "Guides for Evaluating Indigent Medical Care Plans," which were used as criteria for judging the selected programs. Periodic reports have appeared during the past three years in the *Journal of the American Medical Association*.

The new booklet will contain both the "Guides" and reprints of the following studies: (1) state plans—Rhode Island, New York, Pennsylvania, Maryland, Illinois, Washington and North Carolina; (2) local plans—Buffalo, New York; Madison, Wisconsin; Newark, New Jersey; Topeka, Kansas; Gary, Indiana; Cheyenne, Wyoming; Great Falls, Montana; Des Moines, Iowa; Richmond, Virginia; Evansville, Indiana, and Fort Wayne, Indiana. Copies are available on request from the Council.

* * *

A.M.A. Publishes Booklet On Relations Between Doctors and Hospitals

Just off the presses is a new pamphlet on the relationship of physicians and hospitals published by the A.M.A.'s Council on Medical Service. Entitled, "Relation of Physicians and Hospitals," this 16-page booklet contains: (1) "Guides for Conduct of Physicians in Relationships with Institutions" (adopted by the House of Delegates in December, 1951), and (2) "Report of the Joint Committee on Hospital-Physician Relationships of the Boards of Trustees of the American Medical Association and the American Hospital Association" (adopted by the House of Delegates in June, 1953).

Since the House of Delegates adopted the position that the 1953 report should be considered a supplement to the 1951 report, both statements constitute official A.A.A. policy on this subject and are reprinted in this edition. Medical societies, hospital staffs, and individual physicians may secure copies from the Council.

UNITED CEREBRAL PALSY

The United Cerebral Palsy sixth annual convention will be held in Boston, Massachusetts, at the Hotel Statler, on November 11 through 13, according to an announcement by Jack Hausman, of Great Neck, New York, national president of UCP.

Among the important items of business to be transacted at the Convention, according to Mr. Hausman, will be the election of National Officers for the coming year, the President's Report, and meetings of the Board of Directors and other governing bodies of UCP. In addition, there will be many sessions devoted to various aspects of services to the Cerebral Palsied and reports on the UCP research program.

Further information about the Convention may be obtained from the Convention Department.

INSTITUTE OF INDUSTRIAL HEALTH

The University of Cincinnati's Institute of Industrial Health is offering graduate fellowships in industrial medicine. The institute, which is in the College of Medicine, provides professional training for graduates of approved medical schools who have completed at least one year of internship.

The three-year course of instruction, leading to the degree of Doctor of Science in Industrial Medicine, satisfies the requirements for certification in occupational medicine by the American Board of Preventive Medicine. Two years are devoted to intensive academic and clinical study in the field of industrial medicine. A final year is spent in residency in an industrial medical department or in some comparable organization.

Stipends for the first two years vary from \$3,000 to \$4,000 depending on marital status. In the final or residency year a fellow is compensated by the organization in which he is completing his training.

A one-year certificate course, without stipend, is also offered to qualified applicants.

Requests for additional information should be addressed to the Secretary, Institute of Industrial Health, College of Medicine, Eden and Bethesda, Cincinnati 19, Ohio.

MISSISSIPPI VALLEY MEDICAL SOCIETY

Dr. William C. Menninger of Topeka, Kansas, internationally known psychiatrist, has been honored as recipient of the 1955 Honor Award, and Dr. Daniel L. Sexton of St. Louis, nationally known internist, as a recipient of the 1955 Distinguished Service Award, both given by the Mississippi Valley Medical Society.

The awards, comprising plaques and gold medals, were presented to Dr. Menninger and Dr. Sexton by the president of the society, at the banquet held on the occasion of the twentieth annual meeting of the organization, at the Hotel Jefferson, St. Louis, September 29, 1955.

AMERICAN MEDICAL WRITERS' ASSOCIATION

The American Medical Writers' Association has announced the recipients of the 1955 Honor Awards for Distinguished Service in Medical Journalism; these awards go to the following United States medical periodicals:

The award for general medical periodicals with a circulation exceeding 3,000 to the **Public Health Reports**, published monthly by the United States Public Health Service, Washington, D. C.; the award for specialty medical periodicals to the **A.M.A. Archives of Surgery**, published monthly by the American Medical Association, Chicago; the award for periodicals of county and city medical societies of less than 500 membership to the **Bulletin, Sangamon County Medical Society**, published monthly by the

Sangamon County Medical Society, Springfield, Illinois, Jacob E. Reisch, B.S., M.D., Springfield, Ill., Editor, is the recipient of the award for periodicals of county and city medical societies of less than 500 membership.

* * *

Dr. Lee D. Van Antwerp of Chicago, nationally known medical editor, has been honored as recipient of the 1955 Distinguished Service Award given by the American Medical Writers' Association. Dr. van Antwerp is Medical Editor of G. D. Searle Co., Medical Director of G. D. Searle International, the 1955 President of the American Medical Writers' Association and former editor of the Association's **Bulletin**.

AMERICAN HEARING SOCIETY

Appointment of Eugene L. Morrill, Jr., of Houston, Texas, as program director for the American Hearing Society has been announced by Crayton Walker, executive director of the agency. The new staff member assumed duties at national headquarters in Washington on October 1.

In his position as program director for the American Hearing Society Mr. Morrill will assist in development of hearing conservation programs for children in public, private, and parochial schools. Through field service and correspondence he will help chapters to obtain community, state and/or Federal cooperation and support for expansion of services for hard of hearing children and adults in the respective areas.

Mr. Morrill will assist Executive Director Walker in maintaining close touch with the Office of Vocational Rehabilitation, The Children's Bureau, Office of Education (Department of Health, Education, and Welfare), and other agencies which are interested in the hearing problem.

In Memoriam

SELLERS MARK CRISP, M.D.

Dr. Sellers Mark Crisp, 60, of Greenville passed away suddenly at his home on July 20. Dr. Crisp was born at Crisp, in Edgecombe County. He was an alumnus of Davidson College and the Medical School of the University of Pennsylvania. Dr. Crisp had been engaged in the practice of medicine in Greenville and Pitt county since 1926.

WHEREAS—in the infinite wisdom of the Great Physician it has seemed fitting to call unto Himself our beloved brother in the profession and friend, Dr. Sellers Mark Crisp, and

WHEREAS—we have found in his life of service in the City of Greenville, the County of Pitt, and as a member of the staff of Pitt County Memorial Hospital, a selfless sacrifice of himself in the performance of the duties of his profession, and

WHEREAS—the example which he has set in his life as a citizen, Christian and doctor will always remain with us as an ideal and stimulus to more sacrificial service, therefore

Be it resolved that the Medical Staff of Pitt County Memorial Hospital

First, extend to his wife and family its most heartfelt sympathy in this hour of sorrow.

Second, express its appreciation for his services as a doctor, citizen and staff member and its distress over his loss.

Third, send a copy of these resolutions to his family; spread them on the minutes of the Staff; publish them in the **Daily Reflector** and the **North Carolina Medical Journal**.

Resolution Committee
Medical Staff of Pitt County
Memorial Hospital

NORTH CAROLINA

Medical Journal



Vol. 16 No. 11
November, 1955

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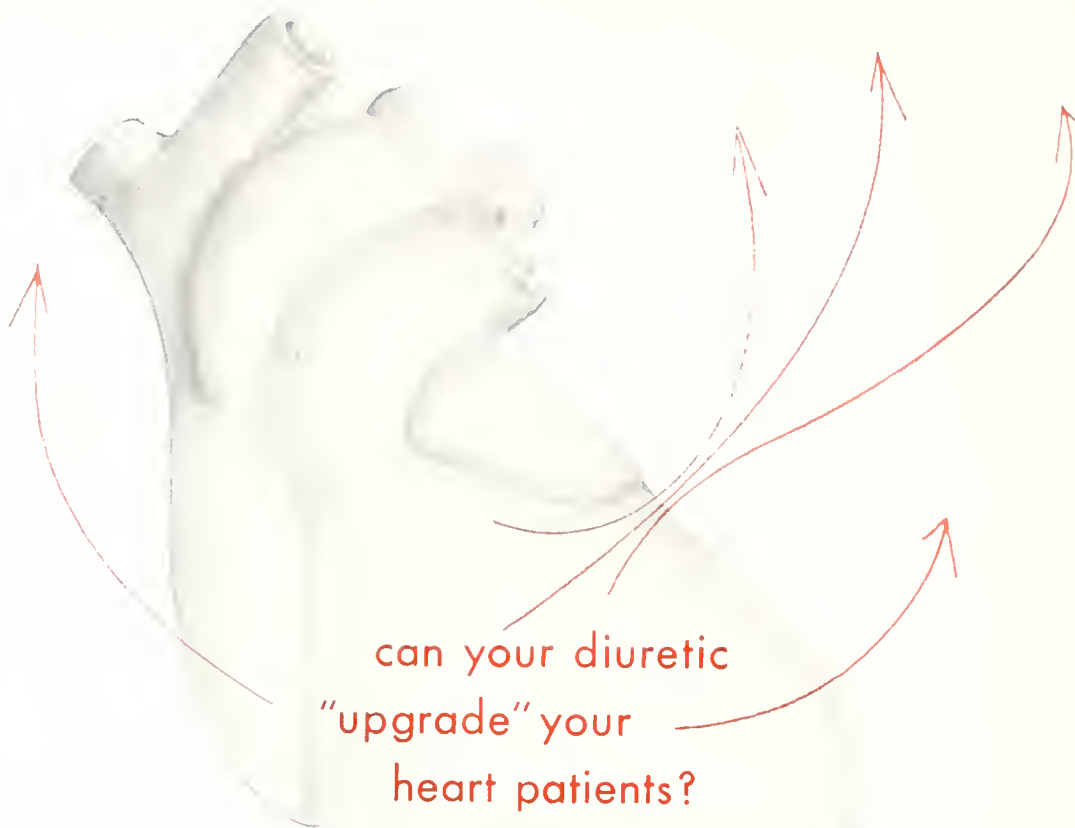
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TRENDS IN THE MANAGEMENT OF TUBERCULOSIS IN CHILDREN

DIRK VERHOEFF, M.D.

and

W. M. PECK, M.D.

McCain

Treatment of tuberculosis in children has not stimulated much interest in recent times. Perhaps this pattern of indifference was set in the pre-drug years when it was difficult to show that any treatment, in or out of a sanatorium, could materially alter the natural course of the disease. This lack of concern has included not only clinicians but public health officials and investigators as well, so that at this moment one is unable to state, or even accurately estimate, the percentage of children in North Carolina who react to tuberculin; and this is an index of considerable importance, not only in estimating the pediatric problem, but in measuring the success of the entire tuberculosis control program.

Recently, however, interest in childhood tuberculosis has been renewed. Though this change has come somewhat belatedly and perhaps reluctantly, it reflects the optimism of new and effective treatment, and improvement in epidemiologic conditions and public health standards which, at long last, provide an acceptable and challenging basis for procedure. Those caring for children now play a much more important role in the over-all problem of controlling tuberculosis, and in the light of this assumption we make the following challenging prediction: The manner in which we treat tuberculosis in children today may very well decide whether or not tuberculosis will continue to exist as a menacing disease 20 years from now. This prediction, of course, is based not on established fact but on various trends

and current developments which make it plausible.

Prevention of Endogenous Re-infection

Under present conditions in North Carolina, with an active case-finding program and actual enforcement of the Health Law, the chance of repeated contact with positive sputum is rather slight. Exogenous infection, accordingly, is likely to occur only once, and then at a time of primary infection. In such a favorable situation, re-infection, or the adult type of disease, is likely to develop only on an endogenous basis—that is, relapse of the primary lesion itself. Public Health officials and those treating the adult type of disease have done their job so well that repeated exogenous re-infection has become improbable; now it is up to those who treat primary tuberculosis to develop methods which will make endogenous re-infection just as unlikely. If this premise is valid—and there is rationale to support it—then our approach to the problem should be:

1. To obtain maximum stability and security for each active primary lesion by optimum drug therapy. This objective applies to both lesions that can be seen by roentgenograms and to those which can be detected only by demonstration of recent tuberculin conversion.
2. To follow each child with a positive tuberculin reaction, just as a carrier of any infectious disease, for many years, with special emphasis on periods of stress such as adolescence.

Obviously, such an approach was im-

practical so long as the great majority of individuals were infected with tubercle bacilli, but with the diminishing incidence of the disease the proportionate importance of each tuberculin reactor as a carrier of viable tubercle bacilli increases vastly in the overall control program. The establishment of actual tuberculin case registries now seems feasible and appears to be the next logical development in our tuberculosis control efforts.

Pathogenesis

In order to develop this thesis, let us recall several essential features of pathogenesis. Tubercle bacilli inhaled by the child at the time of first infection usually lodge in the alveoli and commence a short phase of wild, free multiplication which is unhampered by host resistance. During this period some of the bacilli extend by way of the lymphatic glands to hilar and mediastinal lymph nodes and, escaping these filters, to more distant parts. During this phase of development there are no symptoms, no signs, no radiographic changes, and the tuberculin test remains negative. From about the third to eighth week after infection allergy to tuberculin-proteins develops. Then the host responds with inflammatory changes which are visible on roentgen examination in the region of the original implantation and in the draining lymph nodes; caseation necrosis occurs in varying degree, depending largely on the duration and intensity of the inflammatory process, and we see the development of a lesion which on pathologic and roentgenologic examination can be recognized as a primary tuberculous infection.

As you are aware, this lesion shows a rather pronounced tendency to subside—not to heal, since the causative organism is not destroyed, but to regress to the point of a calcified Ghon complex. Recent exhaustive pathologic studies of these calcified lesions have disturbed us by re-emphasizing their insecurity. Typically they consist of irregular mixtures of calcified spicules, caseation necrosis, and fibrosis. Sometimes soft caseous material is sealed off from a bronchus only by an inspissated plug of necrotic debris. These mechanical barriers to extension of the disease, on which we used to put so much dependence, appear very fragile and haphazard, and oftentimes it seems probable

that calcification and fibrosis actually serve the bacilli by protecting them from the host. The demonstration of calcification, then, should not be accepted as evidence of secure healing, but only as an indication that a severe, destructive process has taken place. It also marks the site of the living tubercle bacilli which the individual must henceforth carry with him as a potential threat to him and his community.

The Hazard of Primary Infection

There is an established tradition for regarding the natural course of primary tuberculous infection as benign. How well earned is this reputation? Available data partly answers this question. Dr. Edith Lincoln⁽¹⁾, in reviewing her experience at Bellevue Hospital, found that in the period before drug therapy 980 children with active primary tuberculosis were admitted to her service. All had lesions which could be demonstrated roentgenographically. Twenty-one and five-tenths per cent of these children died. This percentage may be somewhat high and is possibly weighted by selection in favor of more serious disease, but it is comparable with other reports of hospitalized tuberculous children.

Hyge⁽²⁾ probably comes closer to defining the actual hazard which a child acquires on first exposure to tuberculosis. He describes a situation in which 94 school girls, whose ages ranged from 12 to 18, were simultaneously exposed to tuberculosis. Of these 94 girls, 70 gave positive reactions; and 41 of these showed radiologic evidence of a primary lesion; 37 presented bacteriologic evidence as shown by positive gastric lavage, and pleurisy with effusion developed in 10. In a three-year follow-up period, chronic pulmonary tuberculosis developed in 6 of these girls. In this study, therefore, more than 8 per cent of adolescent girls became re-infected with tuberculosis, presumably on an endogenous basis and as an aftermath of primary infection.

Johnston, Howard and Douglas⁽³⁾, in Detroit, approached the question somewhat differently. They were able to follow 932 children who were removed from tuberculous parents and placed in foster homes. These children all had positive tuberculin tests, and some had evidence of healed primary pulmonary lesions. This group was followed

for periods varying up to 20 years and showed a 3 per cent incidence of re-infection tuberculosis. Here again endogenous re-infection can be held responsible.

Bentley⁽⁴⁾ has emphasized the well known fact that there are two critical age groups: Infancy is critical because of a tendency for the disease to extend locally and also by the blood stream to cause miliary disease and meningitis; adolescence is critical, particularly in girls, because endogenous re-infection is prone to occur during these years of stress. He points out that the closer tuberculin conversion occurs to the time of adolescence, the greater the likelihood of relapse.

From such published data one can only infer that the hazard of primary infection itself is considerable and that it is unrealistic to consider it only a benign, immunizing process. These conclusions are certainly not new nor revolutionary, and they are reviewed merely as background for the proposed scheme of treatment.

Drug Therapy

For primary infection

Drug treatment of primary tuberculosis, just as drug treatment of other forms of tuberculosis, is highly successful. Lincoln's mortality rate for children dropped from 21.5 to 1.5 per cent with the institution of drug therapy⁽⁵⁾, a result so dramatic that one cannot question its effectiveness in children. Actually, drug therapy was given to only 35 per cent of her patients and was withheld from those children who were expected to recover without it. The wisdom of withholding drugs on this basis is currently a subject of rather fierce controversy. For our part, we do not believe that roentgenograms tell us enough, or that clinical finesse is sufficient to distinguish with any reliability which active lesion is dangerous and which is benign. For instance, it is well known that a primary lesion so small that it cannot be seen on roentgenogram may become, nevertheless, the source of meningitis or shed tubercle bacilli into the gastric contents. How then can one possibly observe a gross roentgenographic lesion and identify it as innocuous and not in need of specific drug therapy? Our policy has been to treat with anti-tuberculosis drugs all children who evidence an active tuberculous process. On our pediatric wards we treated 97 children

(exclusive of the meningitis group) during 1953 and 1954. All had positive tuberculin reactions and definite roentgenographic changes varying from a simple primary process to extensive, progressive primary lesions and miliary disease. All received combined drug therapy which invariably included isoniazid. There were no deaths and no tuberculous complications. Symptomatic improvement, with clock-work regularity, followed the institution of drug therapy; in not a single patient did the disease increase. This is in marked contrast to primary tuberculosis treated without drugs, when often there is a prolonged period of fluctuation of the lesion before eventual recovery.

For endogenous re-infection

We cannot, then, doubt the value of drug therapy for the active primary infection itself. But what evidence do we have that it will prevent subsequent endogenous re-infection? We have no direct evidence—and for that matter, probably will not for many years to come—but we do have reason to hope that it will add a significant measure to security.

Early primary lesions under drug therapy seem to resolve more completely and with less residual scarring and calcification. The quantity of infectious material remaining in the child's body, then, would seem to be definitely reduced by drugs. They cannot undo, of course, the destructive changes that have already occurred, but they can halt almost immediately further progression of the inflammatory process. The quantity of infectious material remaining in the child's body, we believe, can be reduced by drug therapy, and this must surely diminish the opportunity for re-infection as well as the probable dosage of bacilli in the event of re-infection.

It is known that isoniazid causes rather profound changes in the tubercle bacilli themselves. Probably virulence is actually attenuated, and certainly growth is slowed. Oftentimes isoniazid forces bacilli into a dormant state from which they recover very slowly, if at all. It seems possible—but by no means certain—that the organisms which persist in these lesions are rendered less dangerous by prolonged exposure to isoniazid, and that their disease-producing potential is diminished, at least temporarily and

perhaps permanently. We know of several patients whose tuberculin tests became negative during therapy, presumably indicating actual sterilization of the lesion; however, this result is exceptional. Perhaps more effective drug combinations in the future can accomplish this with regularity.

In actual clinical application, then, we believe that a child should be given drug therapy whenever tuberculous activity can be demonstrated, and we tentatively propose these indications of activity. Doubtlessly, they should be modified with experience.

1. All primary tuberculous lesions showing radiologic evidence of activity
2. All recent tuberculin converters, regardless of radiologic evidence of disease (How recent should this be? Probably it is conservative to say that if a child has converted within a year, activity still persists within the lesion.)
3. All children under the age of 3 years who are found to have positive tuberculin reactions.

The scheme of drug therapy must be very flexible in order to fit this wide range of indications, and our treatment schedule today looks something like this:

For meningitis and miliary tuberculosis and comparably serious pulmonary lesions we give what we consider maximum therapy. This consists of isoniazid, daily streptomycin, and para-aminosalicylic acid. After initial improvement, usually within one to two months, streptomycin is changed from daily to twice weekly administration, and after a year isoniazid is continued by itself for another two years, giving a total of three years of therapy. Hospitalization is regarded as mandatory for about the first year, but after that treatment in the home becomes feasible.

For the average primary lesion with definite roentgenographic change, we believe that isoniazid and either streptomycin or para-aminosalicylic acid should be given until resorption of the lesion is nearly complete. Then isoniazid alone may be given to complete a total of two years of treatment. Hospitalization is mandatory for children from underprivileged homes, but otherwise is optional. In making this decision, the advantages and disadvantages of hospitalization should be carefully weighed, with serious consideration being given to such advan-

tages of hospitalization as improved rest and general nutrition, close medical supervision, the prevention of intercurrent infection, and the assurance of no interruption in drug therapy. It also removes a child, who is usually actively shedding tubercle bacilli, from contact with other children. If these facilities can be provided in the home, however, treatment might be undertaken in this category of patients outside the Sanatorium.

For those children with recently converted positive tuberculin reaction and no roentgenographic changes, we are now recommending that isoniazid alone be given in the home for a period up to two years. Effort should be made to insure optimum care and adequate rest, but the child should not be regarded as an invalid. We feel that treatment is justified in this relatively low risk group only so long as the treatment itself is both emotionally and physically harmless. The risk and benefit of treatment in this group must be acceptable on a prophylactic basis; and we feel that isoniazid alone when given in the home meets this requirement.

Summary

1. The declining incidence of tuberculous infection in the general population focuses attention on the individual tuberculin reactor as a carrier of viable tubercle bacilli and increases his importance in the overall control of tuberculosis.

2. Proper care of the child at the time of his first tuberculous infection may give a considerable degree of protection against future relapse—a matter of both individual and public health concern.

3. It is proposed that anti-tuberculosis drug treatment be given to the following categories of children with positive tuberculin reaction:

- a. All children with evidence of recent tuberculin conversion (one year)
- b. All children of three or less who are found to have a positive tuberculin reaction
- c. All children with roentgenologic or bacteriologic evidence of active disease.

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RESULTS OF INSULIN COMA THERAPY IN A STATE HOSPITAL

ROBERT N. HARPER, M.D.

RALEIGH

This is a report of a study of 700 State Hospital patients treated with insulin coma between 1947 and 1955, undertaken in an effort to evaluate the treatment in an unselected group of State Hospital patients. It was hoped that it might also offer significant criteria for selecting patients for treatment and determining the optimum number of treatments yielding improvement and the depth of insulin coma utilized.

The difficulties of evaluating psychiatric therapy have been enumerated by David⁽¹⁾, who pointed out the lack of standardized criteria for selecting patients and assessing clinical changes. Bourne⁽²⁾ emphasized the problem of distinguishing between clinical improvement and spontaneous remissions.

Wide variations in the technique of administering insulin coma have been reported, including the depth⁽³⁾ and duration of coma, and the number of treatments⁽⁴⁾. A comparison of reports from different hospitals, such as those by West and colleagues⁽⁵⁾, and Brannon⁽⁶⁾, points up the lack of standardized criteria for evaluating improvement. The lack of adequate controls is a striking deficiency in most reports. Studies by Lifschultz^(4a) and Gottlieb^(4b), both of which include controls, are based on a maximum of 30 treatments, the adequacy of which may be questioned. Bond⁽⁷⁾ found that before shock therapy was instituted at Pennsylvania Hospital, 31 per cent of the schizophrenic patients were recovered or much improved, indicating the rate of improvement in patients who do not receive insulin shock therapy. Studies by Notkin and others⁽⁸⁾ include observations on controls.

Reports of insulin coma therapy also vary with regard to the selection of patients. Hughs⁽⁹⁾ and others indicate that results are better when treatment is given early in the disease, while Kalinowsky and Hoch⁽¹⁰⁾ report a higher remission rate in acute than in chronic cases.

Finally, there is a wide divergence of opinion concerning the efficacy of the treatment. Negative opinions include those of Lifschultz^(4a) and Bourne⁽²⁾, while Shurley⁽³⁾, Wilcox⁽¹¹⁾, Hughs⁽⁸⁾, and Kalinowsky and Hoch⁽¹⁰⁾ state unequivocally that insulin coma is the somatic treatment of choice in schizophrenia. Most of these authorities agree with Morrow⁽¹²⁾ that adequate treatment must include psychotherapy. West and others⁽⁵⁾, among the few to report adequate follow-up studies, point out that insulin coma is effective in restoring the patient to his pre-psychotic level of adjustment, but does not produce permanent resistance to schizophrenia. In general the reports reveal a similar trend of results in terms of overall improvement rates (Fogel^(4c), 70 per cent; Hughs⁽⁹⁾, 52 per cent; Brannon⁽⁶⁾, 47.4 to 71.3 per cent; Paster⁽¹³⁾, 24 per cent recovered, 57 per cent improved.)

There are virtually no reports of insulin coma therapy unassociated with other forms of therapy, such as psychotherapy or concomitant electroshock in cases failing to respond to insulin alone. In all studies, the additional privileges, extra nursing care, and high group morale enjoyed by insulin coma patients in psychiatric hospitals must be taken into account.

Material and Method

The present study includes all patients treated in this unit from April 1, 1947, through April 1, 1955. Seven hundred and sixty-three treatments were given to 737 patients. There were 2 deaths: one occurred 10 minutes after the termination of coma; the cause, undetermined at autopsy, was probably myocardial ischemia and circulatory collapse. The other, due to pulmonary edema and congestion with rapid cardiac decompensation, occurred during coma. Twenty-three patients who were transferred to other mental hospitals during or after treatment were excluded from the series. Ten cases were terminated early because of physical complications, but those which in-

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From North Carolina State Hospital, Raleigh.

cluded more than 10 treatments are included. There were 14 inadequate records. Of the remaining 726 cases, 26 represented retreatment. The total number of patients in the final series is 700.

This survey does not include matching controls. However, we wish to point out that over 75 per cent of the patients in our series had failed to respond to electroshock therapy or to have spontaneous remission after at least one year of illness. The expected improvement rate of untreated schizophrenia is reported to be about 58 per cent⁽¹⁴⁾, which is significantly less than our 74.6 per cent improvement with insulin coma therapy.

In the State Hospital insulin coma units are operated for the male and female services. Each unit averages from 10 to 16 patients on active insulin coma therapy at any one period. Personnel consists of a physician, two nurses and four attendants, plus four student nurses for each unit. The physician is present in the unit during the treatment and is available the rest of the day.

Patients are selected for insulin therapy from the admission ward and the chronic wards of the State Hospital. The technique closely follows the rapid induction method of Shurley and Bond⁽³⁾. Treatment is given five days per week, Monday through Friday. The hypoglycemic state persists approximately four hours for each treatment. Coma is defined as that stage of hypoglycemia in which the patient fails to respond to appropriate stimuli such as being called by name or being physically manipulated. The coma is adjudged to begin at about stage two of Himwich's scale⁽¹⁾ and is terminated at the beginning of stage four. The patient is allowed to stay in coma for one hour. Regular insulin is used, and is given by deep intramuscular injections in doses ranging from less than 100 to 2,000 units. The coma is routinely terminated by the intravenous injection of 50 cc. of 33 1/3 per cent glucose solution followed by the oral administration of 33 1/3 per cent glucose in orange juice.

Concomitant therapy such as electroshock therapy, group or individual psychotherapy, and other specific treatment has been used on a good many patients in the series, but it is not possible to correlate this factor with the over-all results. Both patients and personnel in the insulin unit of the State Hos-

pital possess high morale because of the individualized attention given each patient. The importance of this attention cannot be evaluated objectively, although it probably contributes greatly to the good results obtained from insulin therapy.

Evaluation of Results

The data for this study were collected from the records of all patients who received insulin coma treatment between April 1, 1947, and April 1, 1955, with the exceptions noted previously. The statistical data were coded on McBee statistical cards to include (1) sex, (2) age, (3) marital status, (4) onset of illness as described by the patient's immediate family, (5) year in which therapy was given, (6) number of comas, (7) number of courses of therapy, (8) diagnosis according to the *Diagnostic and Statistical Manual of the American Psychiatric Association*, (9) additional therapy such as electroshock therapy, group or individual psychotherapy, and lobotomy, (10) number of treatments, and (11) results.

The degree of clinical improvement was listed as 0 or unimproved for those patients who came to the insulin treatment unit from a chronic ward and after treatment returned to a chronic ward. Those patients who came to the insulin treatment unit from an admission ward and after treatment were sent to a chronic ward were also considered unimproved. One plus improvement includes those who came from a chronic ward or admission ward and under treatment improved sufficiently to adjust on a ward requiring more self-reliance and with the privilege of occasional home visits. Two plus improvement applies to those patients who were able to adjust in an extramural environment for four months or more after treatment before they had relapses necessitating readmission. In other words, this group includes patients making social recoveries who have had remissions. The 3 plus group includes patients who were discharged from the hospital within six months after therapy and who remain out of the hospital to this date.

Following the tabulation of data, multiple random correlations were attempted. Those correlations felt to be of clinical interest whether or not they were significant are represented in the following tables:

Table 1
Results in 726 Cases Treated with Insulin

	No.	0	2	1	3	Total Improvement
Maniac-depressive Reaction						
Manic type	22	3 (13.6%)	4 (18.2%)	2 (.09%)	13 (59%)	19 (86.4%)
Depressed type	21	2 (10.%)	3 (14.3%)	2 (10.%)	14 (66.7%)	19 (91%)
Others	8	3	0	2	3	5
Schizophrenia						
Simple	15	2	6	2	5	13
Hebephrenic	51	16 (31.4%)	8 (15.7%)	8 (15.7%)	19 (37.3%)	35 (68.6%)
Catatonic	138	40 (29%)	21 (15.2%)	23 (16.7%)	54 (39.1%)	98 (71%)
Paranoid	286	79 (27.6%)	69 (24.1%)	71 (24.8%)	67 (23.4%)	207 (72.4%)
Acute undifferentiated	38	5 (13.1%)	0	7 (18.4%)	26 (68.4%)	33 (86.9%)
Chronic undifferentiated	49	12 (24.5%)	15 (30.6%)	4 (8.2%)	18 (36.7%)	37 (75.5%)
Schizo-affective	36	9 (25%)	9 (25%)	4 (11.1%)	14 (38.8%)	27 (75%)
Paranoid state	4	1	0	0	3	3
Schizoid personality	2	1	0	1	1	2
Others	55	11 (20%)	6 (10.9%)	13 (23.6%)	25 (45.5%)	44 (80%)
TOTAL	726	184 (25.3%)	141 (19.4%)	139 (19.1%)	262 (36.1%)	542 (74.6%)

Table 1 lists the results of insulin coma therapy according to diagnosis. This table also gives an indication of the diagnostic distribution of the patient since this is an unselected series of patients who, for the most part, were legally committed. It shows the largest diagnostic classifications to be paranoid and catatonic schizophrenia (39.4 and 19.0 per cent of the total) followed by hebephrenic and the undifferentiated schizophrenia. The 3-plus recovery rate in the depressive group was 66.7 per cent, all of whom had previously failed to respond to electroshock therapy; 59 per cent of the manics recovered. Of the schizophrenic group, the most gratifying results were found in the acute, undifferentiated types (68.4 per cent full recovery) which perhaps is a tribute to the efficacy of early treatment. Among the schizophrenias the paranoid showed good response, but had a high relapse rate. The 55 patients listed as "others" include such diagnostic classifications as mental deficiency with psychosis, involutional reaction, and so forth.

Of the entire 726 patients treated, 262 or 36.1 per cent are still out of the hospital; 542 or 74.6 per cent showed worth-while clinical improvement, while 184 or 25.3 per cent failed to show an adequate response.

Tables 2 and 3 give the results of acute chronic cases. "Acute" is defined to include those cases treated within one year after the recognition of mental symptoms by the patient's family. "Chronic" is defined to include those cases treated more than one

Table 2

Results in Acute Cases		
Grade	No.	
0 —	23 (15.8%)	123 (84.2%) Improved
1 —	22 (15.1%)	
2 —	24 (16.4%)	
3 —	77 (52.7%)	
TOTAL	146	20.1% of Total cases are acute

Table 3

Results in Chronic Cases		
Grade	No.	
0 —	161 (27.8%)	419 (72.2%) Improved
1 —	119 (20.5%)	
2 —	117 (20.2%)	
3 —	183 (31.6%)	
TOTAL	580	79.9% of total cases are chronic

year after the recognition of symptoms by the patient's family. Of 146 patients treated within the first year of their illness, 123 (84.2 per cent) showed definite improvement, while 77 (52.7 per cent) have made full social recoveries. Of the 580 chronic cases treated more than one year after the onset of illness, 419 (72.2 per cent) improved, but only 183 (31.6 per cent) made full social recovery. These differences are statistically significant and illustrate the need for and advantage of early treatment in mental illness, particularly schizophrenia.

Table 4 shows the correlation of results with the number of comas given to the pa-

Table 4
Results by Number of Comas

No. Comas	No. Cases	0	1+	2+	3+	Total Results
0-10	113	52 (46%)	19 (16.8%)	15 (32.7%)	27 (23.9%)	61 (54%)
10-20	53	12 (22.6%)	13 (24.5%)	8 (15.1%)	20 (37.7%)	41 (77.4%)
20-30	85	24 (28.2%)	20 (23.5%)	11 (12.9%)	30 (35.5%)	61 (71.8%)
30-40	145	28 (19.3%)	24 (16.6%)	34 (23.5%)	59 (40.7%)	117 (80.7%)
40-50	126	26 (20.6%)	26 (20.6%)	25 (19.8%)	49 (38.9%)	100 (79.4%)
50-60	98	17 (17.3%)	22 (22.4%)	26 (26.5%)	33 (33.7%)	81 (82.7%)
60-70	104	23 (22.1%)	17 (16.3%)	20 (19.2%)	44 (42.3%)	81 (77.9%)
70-80	2	2	0	0	0	0
	726	184 (25.3%)	141 (19.4%)	139 (19.1%)	262 (36.1%)	542 (74.6%)

tient. The 113 patients receiving less than 10 treatments largely represent those cases treated in the earlier years of 1947 and 1948 when smaller doses of insulin were used than are now employed. The most gratifying improvement rate occurred between the series of 30 and 60 comas. I feel that less than 40 comas constitutes inadequate treatment, so that the large number of cases previously treated at this hospital with a smaller number of comas has an adverse influence on the total recovery rate reported here.

Table 5 shows the correlation between the age of the patient and the results of insulin coma. Ninety-three per cent of the patients ranged from 20 to 50 years of age, while five per cent were younger than 20 and only 2 per cent exceeded 50 years. Due to the small number in the extreme age groups, a statistically significant correlation between age and improvement could not be established. The data of the youngest group suggest increased improvement, but this might be due to the acuteness of the

psychosis in that group.

Table 6 shows the results correlated with the sex. The greater number of female patients as well as the higher rate of improvement among the female patients is most interesting. Several variable factors which influence this striking difference have been considered. A great many of the acutely ill, previously well adjusted psychotic young men in the general population are admitted either to Veterans Administration hospitals directly or are transferred from the admission ward of the State Hospital to the Veterans Hospital. Perhaps the absence of this more treatable group accounts partially for the disparity between the improvement rates for males and females in this series, since there should be little difference in the expected recovery rates between the sexes.

Table 7 shows the results of a second course of insulin in 26 patients. Following the first course of insulin, 6 of these 26 made no improvement at all; 5 made 1-plus improvements; 15 made social recoveries, but

Table 5
Results by Age Group

Age (years)	No.	Degree of Improvement				Total Results
		0	1	2	3	
10-20	37	5 (13.5%)	7 (18.9%)	8 (21.6%)	17 (45.9%)	32 (86.5%)
20-30	255	70 (27.4%)	46 (18%)	44 (17.2%)	95 (37.2%)	185 (72.6%)
30-40	253	68 (26.9%)	48 (18.9%)	54 (21.3%)	83 (32.8%)	185 (73.1%)
40-50	164	35 (21.3%)	35 (21.3%)	31 (18.9%)	63 (38.4%)	129 (78.7%)
50-60	17	6	5	2	4	11
Totals	726	184 (25.3%)	141 (19.4%)	139 (19.1%)	262 (36.1%)	542 (77.9%)

Table 6
Results According to Sex

Female			Male		
Improvement	No.		Improvement	No.	
0 —	95 (20.8%)	362 (79.2%) Improved	0 —	89 (33.1%)	180 (69.9%) Improved
1 —	92 (20.1%)		1 —	49 (18.2%)	
2 —	85 (18.6%)		2 —	56 (20.8%)	
3 —	185 (40.5%)		3 —	75 (27.9%)	
Total	457		Total	269	

Table 7
Results with Repeat Courses of Insulin

First Course			Second Course		
Improvement	No. Patients		Improvement	No. Patients	
0 —	6 (23.1%)	76.9% Improved	0 —	3 (11.5%)	88.5% Improved
1 —	5 (19.2%)		1 —	5 (19.2%)	
2 —	15 (57.7%)		2 —	13 (50%)	
3 —	0		3 —	5 (19.2%)	
Total	25		Total	26	

later relapsed. With their second course of insulin, 3 failed to respond; 5 made 1-plus improvement; 13 made social recoveries, but later relapsed; and 5 made social recoveries sufficient to permit them to remain outside the hospital. Although not statistically significant, these results indicate that this group of 26 patients responded better to their second course of insulin than to their first course.

Conclusion

1. Insulin coma therapy is the somatic treatment of choice for schizophrenia both acute and chronic.

2. Patients with affective psychosis who have failed to respond to electroshock often respond well to insulin coma therapy.

3. The best results were obtained in those cases where treatment was instituted within one year after the onset of symptoms. This dramatizes the need for early diagnosis and treatment.

4. Because of the small number involved, statistical significance could not be established in the case of the 26 patients who received a second course of insulin. Their response would indicate, however, that treatment is not contraindicated and would bear further investigation.

5. The use of insulin coma therapy at the State Hospital has resulted in the return home of many patients who, without such therapy, still would be hospitalized.

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Abstract of Discussion

Dr. Thomas Wright (Charlotte): I am fortunate in having been associated with Drs. Shurley, Bond, Rivers and West at the Pennsylvania Hospital. Dr. Harper bears out that they have always said: that insulin coma therapy is beneficial, primarily in the schizophrenic.

In evaluating this treatment, we were always conscious of three factors: First is the spontaneous

recovery rate in schizophrenia. That is a difficult point to determine. According to my latest information, (it varies with different reports) it is sometimes placed as low as 10 per cent, but averages about 20 per cent. Second, most affective psychoses will recover spontaneously or with electroshock. Many of the earlier reports contain a large element of these psychoses, which should respond to this treatment. Third, insulin coma patients are an elite group in psychiatric hospitals. We tried many experiments, trying to eliminate all three factors in order to evaluate insulin shock *per se*. Whether it is permanently beneficial or not is open to question, primarily because of the spontaneous recoveries and the high rate of relapse. One cannot fail, however, to be impressed by the effects of insulin coma treatment on schizophrenia.

In evaluating electroshock, spontaneous recovery rate is also a factor to be considered. Many patients recover, with or without treatment, after a time. I feel that electroshock definitely shortens this period. On the other hand, even if the schizophrenic patient is temporarily relieved of the psychosis, he still has a poorly integrated personality, and this factor undoubtedly accounts for the high rate of relapse.

I am convinced that insulin coma has a definite effect during the psychotic episode of the schizophrenic personality. The treatment may be enough to keep the patient well, but in most instances he will have a relapse if his environment isn't improved or his conflicts aren't solved by psychotherapy.

I sincerely hope that state hospitals and other sanatoriums will continue to use this form of treatment. In private practice we lack the facilities to do so.

Question: I would like to ask how many complications were encountered in the 700 patients.

Dr. Harper: I mentioned the 2 patients whom we lost, one about 10 minutes after therapy and one during therapy. The first death was probably due to myocardial ischemia and the second to pulmonary edema and cardiac failure. These are the only deaths we have had. Occasionally we have encountered hypersensitive reactions to the insulin, but we have frequently been able to eliminate these reactions by changing preparations. We have had to discontinue treatment in certain cases for such reasons as lung abscesses and tuberculosis. On the whole, complications have not been a great problem.

Dr. J. D. Bradley (Asheville): Do you use any protractive coma?

Dr. Harper: Not deliberately. We are rather glad sometimes, after the patient has recovered, that it happened, because we think we see improvement in these cases. We naturally do everything we can to bring the patient out of the coma, but in some instances the results have been gratifying.

Dr. James W. Murdoch (Butner): My experience in psychiatry goes back more than 30 years, long before the days of insulin coma or other modern methods of treatment. Although I am not able to quote statistics, in the state hospital where I worked, the patients who did get better took a long, long time to do so. Very rarely were they discharged within nine months or a year. Nowadays we get them out much quicker than that. I think the main benefit of insulin coma lies not so much in the number of actual recoveries but in the shortened period of treatment.

About the duration of coma: A doctor with whom I was working once induced a coma that lasted 10 hours. It was fairly simple to get the patient out, but on the second day he induced a coma lasting 10 weeks. At the end of that time the patient came

around quickly. She had been quite demented, but was now a placid, easily managed patient.

You mention the effect of treatment on patients who had had symptoms for more than a year. What is your limit with regard to duration of illness.

Dr. Harper: I don't recall that we had any fixed limit. We treated one patient who had been ill for 20 years.

Dr. Marion M. Estes (Raleigh): These cases were selected very much at random. For instance, a badly deteriorated patient was selected because he impressed us as being a suitable candidate for treatment. We treated several patients who had been institutionalized for 10 years, sometimes with surprising results.

POLYOSTOTIC FIBROUS DYSPLASIA WITH EXTRASKELETAL FEATURES

Report of a Case with Postmortem Observations

JOHN C. WIGGINS, JR., M.D.

WINSTON-SALEM

Polyostotic fibrous dysplasia with bizarre extraskeletal manifestations — "Albright's syndrome" — remains obscure in etiology and uncommon in occurrence since the description of 5 cases by Albright and his associates⁽¹⁾ in 1937. At that time the authors outlined the three cardinal features:

"(a) Bone lesions which have a marked tendency to be unilateral and which show osteitis fibrosa on histologic examination.

(b) Brown nonelevated pigmented areas of skin which tend to be on the same side as the bone lesions.

(c) An endocrine dysfunction which in females is associated with precocious puberty."

Historical Aspects

Interest in fibrocystic diseases of bone was strongly stimulated in 1925, when the removal of a parathyroid tumor from a patient with osteitis fibrosa cystica produced dramatic results⁽²⁾; and when parathormone was discovered. It soon became evident, however, that some cases which at first glance seemed to be hyperparathyroidism had no parathyroid tumor or hyperplasia. Hunter and Turnbull⁽³⁾ in 1931 distinguished between the generalized disease with hyperparathyroidism and the focal condition where no such metabolic alteration was present. In 1933 Jaffe⁽⁴⁾ also found evidence of such a new entity in his cases. Numerous instances^(5,2) of localized osteitis fibrosa

From the Departments of Medicine of the City Memorial Hospital and The Bowman Gray School of Medicine of Wake Forest College.

were reported during this period, some with extraskeletal features. Confusion still remained, however, until Albright and his co-workers^(1,6), in 1937 and later, elucidated the distinguishing features of this entity.

Attention was then given this newly recognized syndrome by other investigators; of these, Lichtenstein and Jaffe⁽⁷⁾ felt that the bone lesions were the most important feature of the disorder and therefore used the term "polyostotic fibrous dysplasia." In 1942, however, these authors⁽⁸⁾, reporting 15 cases of their own with 75 from the literature, used the term "fibrous dysplasia of bone," thus including monostotic lesions as well. It has been questioned^(9,2) whether or not single bone lesions without extraskeletal changes should be included in the diagnosis of this disease.

At present the older terms "focal osteitis fibrous cystica" and "osteitis fibrous disseminata" have been largely replaced by the terms "polyostotic fibrous dysplasia," "fibrous dysplasia of bone," and—particularly in the cases with the more complicated manifestations—"Albright's syndrome."

Less than 50 cases of this complete syndrome have been reported⁽¹⁰⁾, though Pritchard⁽²⁾, in his thorough review of the literature in 1951, found 79 cases of fibrous dysplasia with cutaneous pigmentation. In 1954 Belaval and Schneider⁽¹¹⁾ added 2 cases with pigmentation and one with precocious puberty; and Harriman and Miller⁽¹²⁾ reported a case with pigmentation complicated by changes ascribed to lipoid granulomatosis.

Presented here is a case of polyostotic fibrous dysplasia marked by characteristic skin pigmentation, mental deficiency, and minor neurologic abnormalities, with death from apparently unrelated cardiac disease at the age of 32 years. Autopsy observations are reported.

Case Report

The patient was a 32 year old white man, formerly a truck driver, who was first admitted to City Memorial Hospital because of shortness of breath.

First examination

He had been examined a year previously in the Outpatient Department of the North Carolina Baptist Hospital because of "heart trouble and constant headache." The headache, as well as right frontotemporal enlargement and tenderness, was dated from a head blow at the age of 5 years which was severe enough to cause five hours of unconsciousness. Later he stated that 18 months before this examination a blow from a "blackjack" resulted in a right parietal fracture, allegedly relieving

the headache for several months. There was a history of defective vision in the right eye, poor hearing on the left, and a frequently noted anosmia since childhood.

He also complained of "tight pressure pain" in the chest for 10 years, which had been worse for the past year, usually in the anterior axillary line at the level of the fifth rib, occasionally substernal, and sometimes radiating down the left arm. For about three years he had noticed palpitation on exertion, and for three months he had suffered from exertional dyspnea, orthopnea, and paroxysmal nocturnal dyspnea. He had been told he had a heart murmur and heart trouble in childhood, and that he had always been rather asthenic. For a year and a half he had had frequent short episodes of dizziness, blurred vision, diplopia, and weakness. All symptoms had improved after digitalization two weeks before this examination.

He had had no diseases suggestive of rheumatic fever, jaundice, or encephalitis. Curious areas of pigmentation on the left side of the neck, left buttock, and left thigh had been present since birth. The patient stated that there had previously been a large brown spot on the left posterior portion of the trunk, but this spot was no longer present. Fractures had occurred in both legs, ribs, and skull.

He had always been considered by his family to be "peculiar," dull, and different from his siblings, and he had had frequent episodes of nervousness and depression. He finished the seventh grade with difficulty at the age of 15 years.

There were no known familial diseases and no history of bone diseases, abnormal pigmentation, or endocrine disorders.

Physical examination revealed a rather dull, sulen, apprehensive young man. The head was large and asymmetrical, with a tender right frontotemporal prominence, irregularity and bulging of the right occipital area, and wide-set eyes. The left palpebral fissure was wider than the right, and there was a slight esophoria. There were irregular areas of light brown pigmentation over the left side of the neck, left buttock and posteromedial surface of the left thigh. The heart was enlarged to the left 5 cm. beyond the midclavicular line; and an aortic systolic thrill, a grade 4 harsh aortic systolic murmur, and a grade 2 soft early diastolic murmur along the left sternal border were noted. Blood pressure was 98 systolic, 72 diastolic, pulse 82, respiration 16. The edge of the liver was felt 6 cm. below the right costal margin, and was tender. Moderate hyperesthesia was reported over the right leg, with slight hypesthesia of the right buttock and thigh and of the right arm and forearm. There were no abnormal alterations in the reflexes. Diagnoses were rheumatic heart disease with aortic stenosis and possible insufficiency, and possible cerebral trauma. The patient refused further study at this time.

First hospital admission

One year after the previous examination the patient was admitted to City Memorial Hospital because of increased symptoms of congestive heart failure for four months, following an episode of unconsciousness of unknown duration experienced while he was driving a truck. After this he had numerous momentary "blackouts." Three weeks before admission he experienced a sudden severe substernal pain accompanied by profuse sweating; after this he had frequent scapular pains on the right, radiating to the left shoulder and arm, lasting three or four minutes and usually brought on by paroxysms of coughing. For a year he had had frequent dull aching in his legs.

Physical examination: Blood pressure was 120



Fig. 1. Photograph of patient in case reported showing facial asymmetry, lateral displacement of eyes, and right frontal bosselation.

systolic, 80 diastolic, pulse 88, respiration 36, temperature 98.8 F. The patient was lying in bed in acute respiratory distress. Coarse crackling rales were heard in both lung bases posteriorly, and expiratory rhonchi were scattered through both lung fields. The heart was enlarged to the left anterior axillary line in the sixth intercostal space, and 2 cm. to the right of the sternum. Occasional extrasystoles occurred. The pulmonic second sound was increased. The systolic thrill and murmur were present as before, with no diastolic murmur. The liver was larger than before. The lower extremities were edematous. The areas of brown pigmentation previously mentioned were noted to have irregular outlines and serrated borders. The facial and cranial bones were asymmetrical, with an especially prominent right frontotemporal enlargement.

Laboratory data: The erythrocyte sedimentation rate was 23 mm. per hour (corrected). The Sulkowitch test showed hypercalcuria (3 plus). No Bence-Jones protein was present. Levels of nonprotein nitrogen, serum chlorides, carbon dioxide combining power, serum proteins, and the albumin-globulin ratio were normal. Serum calcium values were 9.4 and 10 mg., serum phosphorus 3.75 and 4.6 mg., alkaline phosphatase 10.1 and 10.6 Bodansky units, and acid phosphatase 3 Gutman units. Serologic test for syphilis was negative. The electrocardiographic interpretation was normal sinus rhythm, right heart strain pattern, and digitalis effect, with a possible alternative diagnosis of anterior wall coronary pattern.

Roentgenograms (interpreted by Dr. H. S. Adams): The heart was greatly enlarged, and there

was evidence of passive congestion of the lungs. There were cystic changes in the third left rib posteriorly. Skull films showed tremendous thickening of the frontal bone, much greater on the right side, with an extreme degree of thickening of the floor of the anterior fossa, especially on the right, with several cystic areas. The right malar arch and right maxilla were similarly affected. In the right side of the anterior two thirds of the third lumbar vertebra there was a large cystic area. The bony pelvis was asymmetrical, with a broadening of the right ischium, cystic change in the inferior portion of the right acetabulum and right pubic arch, and cystic areas in the right femoral head, neck, and proximal portion of the shaft. The roentgenologist considered the most likely diagnosis to be fibrous dysplasia of the bone.

Course in hospitals: Congestive heart failure responded to treatment. Complaints were of occasional headaches, leg ache, and toothache. There was some mental confusion during the last few days of the patient's stay, but the patient was discharged improved after 21 days.

Second hospital admission

Five days after being discharged the patient was readmitted because of severe dyspnea and an increase in substernal pain.

Physical examination: The blood pressure was 104 systolic, 80 diastolic, pulse 114, respiration 30, temperature 99.8 F. There was an increase in edema of the legs and feet, and numerous petechial hemorrhages were scattered over the chest, abdomen, and back.



Fig. 2. Predominantly unilateral cutaneous pigmentation of the buttocks, thigh and neck (inset) demonstrating the irregular, serrated, "coast-of-Maine" borders of the skin lesions.

Laboratory data: The white blood count was 13,300, with 90 per cent neutrophils and 4 per cent bands. Urine contained albumin (2 plus) and, on the day of death, numerous finely granular casts.

Course in hospital: The patient continued to have chest pains and cough. Three days after admission he had an episode of paroxysmal atrial tachycardia which lasted one and one-half hours; after this, hemoptysis and numerous bouts of tachycardia ensued. He died five days after admission.

Postmortem observations

The most significant notations on gross examination (by Dr. D. S. Morris) were as follows:

Neck: The thyroid gland was grossly unremarkable. Two parathyroid glands were found on the right, one on the left; and neither showed any gross abnormality.

Thorax: Seven hundred-fifty cubic centimeters of clear yellowish fluid was encountered in each pleural cavity. The left third rib posteriorly showed loss of bony trabeculae, and was grey, soft and pliable. The pericardial sac was thin, and its cavity contained an estimated 100 cc. of clear yellowish fluid. The thymus was largely replaced with adipose tissue. The heart was enlarged, weighing 705 gm., and showed much hypertrophy and dilatation of all four chambers. The epicardial surface overlying the anterior and lateral portion of the left ventricle near the apex had a dusky red appearance. In the apical region of the left ventricular cavity was a mural thrombus measuring 4.0 cm. in the greatest dimension. Both the mitral and tricuspid rings were dilated. The aortic valve leaflets were markedly thickened, with rolling and eversion of the edges, fusion of commissures, and formation of calcific nodular areas on the superior surface. The valve was stenosed to a diameter of only 4.0 mm. There was no evidence of coronary atherosclerosis, and aortic sclerosis was minimal. There were firm, red-black areas of infarction in the upper and lower lobes of the left lung and the upper and middle lobes of the right lung.

Abdomen: The peritoneal cavity contained 1,500 cc. of clear yellowish fluid. The liver weighed 1,660 Gm. and had a finely yellow-mottled surface, with a typical "nutmeg" appearance on cut section.

Retroperitoneal region: The adrenal glands were grossly normal. The renal capsules stripped with ease, revealing a smooth surface with scattered tan-brown areas measuring 2 to 3 mm. In the third lumbar vertebra a focal greyish area measuring 5 cm. was encountered.

Central nervous system: The skull was asymmetrical, with prominent bosselation and thickening, up to 2.8 cm., in the right frontal and parietal bones, and massive thickening, up to 4.0 cm., of the orbital plate of the right frontal bone. Cut sections of these areas of bony thickening were greyish. On examination of the brain the inferior gyri of the right frontal lobe were seen to be compressed, but in multiple coronal sections through the brain no gross pathologic changes were observed.

Histologic examination

Skin: Sections from pigmented areas disclosed prominent increase in melanin in the basal layer of the epidermis.

Lymph node: There was moderate hyperplasia of reticuloendothelial cells of the sinusoids.

Heart: The section of aortic valve revealed extreme thickening with hyalinization of fibrous tissue and focal nodular areas of calcification. The aortic leaflet of the mitral valve also showed some hyalinization of proliferated fibrous tissue. Myocardium from the ventricular septum showed much hypertrophy of myocardial fibers, with large, rec-

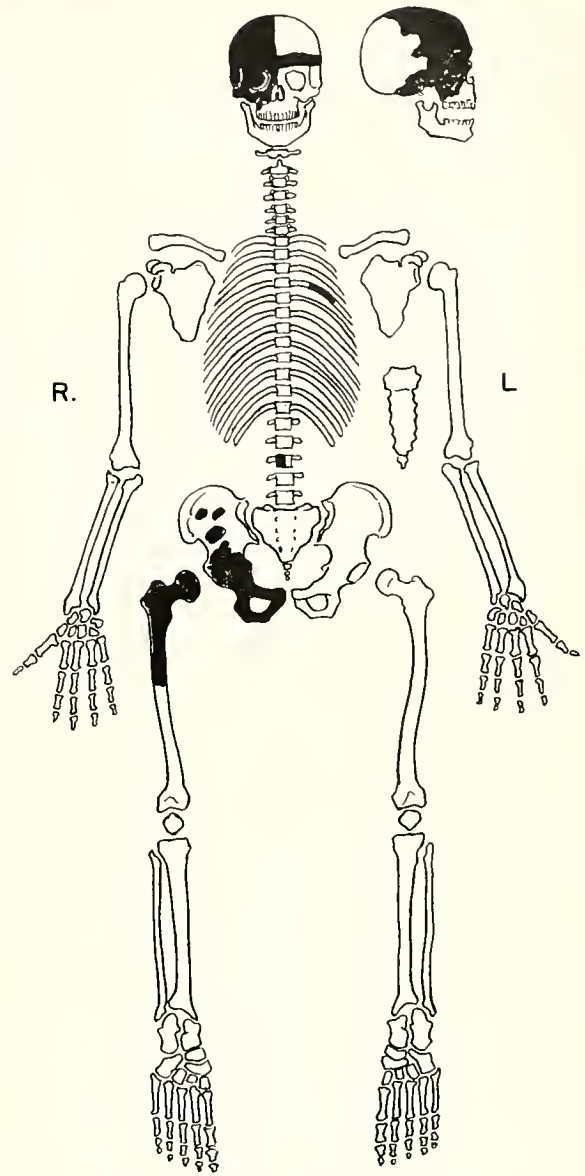


Fig. 3. Diagram illustrating the predominantly unilateral, spotty distribution of the bone lesions in this patient. (After Albright)

tangular nuclei. Focal areas of fibrosis with replacement of myocardial fibers were present. In sections from the anterolateral wall of the left ventricle, myocardial fibers were replaced by fibrous scar tissue. The overlying laminated thrombus was composed of fibrin and erythrocytes showing varying degrees of lysis, and at the juncture between the endocardium and thrombus there was active organization characterized by proliferation of capillaries and fibroblasts and the presence of scattered lymphocytes. In some areas medial hypertrophy and varying degrees of subintimal fibrous thickening were noted in the small muscular arteries.

Lungs: Many alveoli contained histiocytes laden with brown hemosiderin granules, and in some sections extensive extravasation of erythrocytes filled the alveolar spaces. In the infarctions described grossly there was complete necrosis of pulmonary



Figure 4

A. Hyperostotic changes in the skull and facial bones, with massive thickening of the frontal bone and its orbital plate.

B. Roentgenogram showing broadened right ischium, cystic appearance in the inferior portion of the right acetabulum and right pubic arch, and cyst-like areas in the right femur. (Inset) Large cystic area in the third lumbar vertebra.

parenchyma with only "ghost" remnants of architecture, and hemosiderin-laden histiocytes were numerous in peripheral areas.

Liver: There was prominent hyperemia of the central zones of the lobules with dilatation of the sinusoids and associated atrophy of liver cell cords.

Spleen: In the small muscular arteries associated with the malpighian corpuscles there was some thickening and hyalinization of the intima and media.

Adrenal glands: Focal collections of lymphocytes were encountered in the medulla of both glands.

Kidneys: Ovoid to circular areas of calcium salt deposition were present in the interstitial tissue and in some of the papillae. In the prostate gland, seminal vesicals, thyroid gland and parathyroid gland, no pathologic changes were seen.

Brain: In several representative sections no notable pathologic changes were encountered.

Pituitary gland: No notable pathologic changes were found.

Bone: In the third lumbar vertebra there was proliferation of fibrous tissue. The fibers were eosinophilic and rather delicate, and contained a moderate number of well differentiated spindle fibroblasts. In some areas of this proliferated fibrous tissue there was a deposit of eosinophilic osteoid material between tissue cells. In some fields this deposit had proceeded to form rather bizarre bony trabeculae. Bone sections from the frontal region and orbital plate showed similar fibrous tissue proliferation and the formation of many bizarre bony trabeculae in the fibrous tissue sheets. In the right parietal bone were irregular areas of calcification and bony trabeculae in the loose to dense fibrous tissue. The third rib showed marked fibrous tissue proliferation replacing bone, and the development of small, irregular, bizarre trabeculae in the fibrous tissue sheets. A section from an un-

involved portion of the rib showed normal and rather cellular bone marrow.

Anatomic diagnosis: (1) Polyostotic fibrous dysplasia of bone. (2) Chronic, calcific, stenosing rheumatic aortic valvulitis. (3) Marked hypertrophy and dilatation of all chambers of the heart. (4) Myocardial infarct, anterior lateral wall of left ventricle, with fibrosis and mural thrombus formation. (5) Bilateral hydrothorax, hydropericardium, ascites, peripheral edema. (6) Multiple bilateral pulmonary infarcts. (7) Marked chronic passive hyperemia of liver. (8) Compression distortion of the inferior gyri of the right frontal lobe. (9) Cutaneous pigmentation due to melanosis of the basal layer of epidermis.

Comment

Skeletal abnormalities were first noted in this patient at the age of 5 years (allegedly related to trauma), with asymmetrical, tender bony prominences of the skull, particularly on the right, and constant dull headache. Prior to death he complained of leg pains. He had had five fractures (extremities, skull and ribs) in the past. Roentgenographic survey revealed changes compatible with polyostotic fibrous dysplasia: spotty, localized, predominantly unilateral osseous lesions, with normal-appearing bone elsewhere; and skull changes which were mainly hyperostotic, diminishing the anterior fossa, obliterating the right maxillary sinus, and deforming the face.

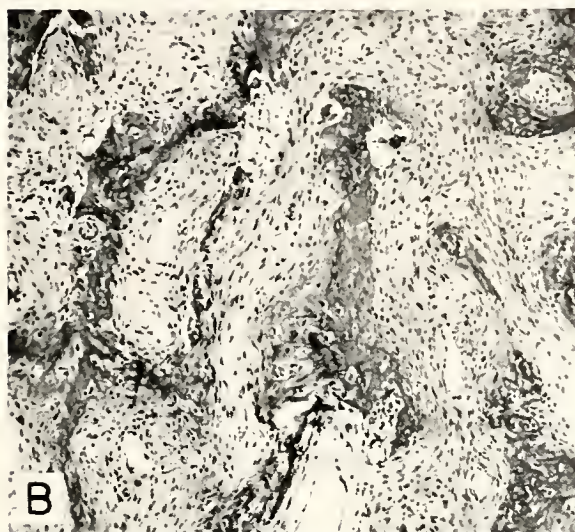
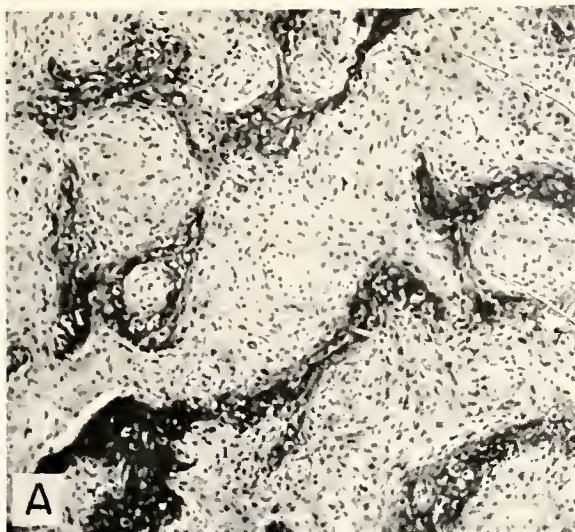


Fig. 5A. Photomicrograph of section of right frontal bone (x 65). Thin, curled trabeculae have a fairly regular arrangement in moderately cellular fibrous tissue.

B. Features of deposition and resorption of metaplastic bone. Right frontal bone (x 65).

Except for sexual precocity in females, the bone lesions are the primary clinical manifestations of Albright's syndrome. Pains in the extremities were presenting complaints in over 70 per cent of the cases reported by Belaval and Schneider⁽¹¹⁾, and fractures, frequently multiple, had occurred in 36 of the 39 cases reviewed by Dockerty and his associates⁽¹³⁾. The skeletal changes evolve slowly, usually reaching a maximum before maturity, but in the more severely affected patients there may be much deformity and crippling in early childhood⁽²⁾. Closure of

the epiphyses usually signals cessation of activity of the osseous lesions, but several cases^(8,13) indicate the possibility of continuation or reactivation of the process in adult life. The bone abnormalities are varied, usually beginning with proliferation of fibrous tissue in the medulla, replacing at first the marrow, then the cancellous bone and cortex. Metaplastic bone may then be laid down in small masses or irregular trabeculae which sometimes become a dense mass, and sometimes form a uniform or irregular honeycomb structure; or large islands of cartilaginous masses may occasionally develop, a process which does not occur in the monostotic lesions, as Valls, Polak and Schajowicz⁽¹⁴⁾ have pointed out. Multinuclear giant cells are frequently seen in groups, especially in vascular or hemorrhagic areas.

A peculiar feature pointed out by Albright^(1,15) is the propensity for a regional and unilateral distribution, so that even in extensive bilateral disease there is usually a unilateral predominance. The extremities are most often affected, the lower limbs more frequently than the upper, with the upper end of the femur being most commonly involved. The skull and face are the next most common sites, with lesions of the trunk bones occurring somewhat less often. As in this case, the skull lesions are generally hyperostotic, marked by great thickening and density in the base, encroachment on the cranial cavity, and thickening of the vault through enlargement of the outer table. In this patient the eyes were forced apart, a slight left proptosis was produced, and the right maxillary sinus was obliterated. Uninvolved bone retained its normal structure, as distinguished from that in hyperparathyroidism where the whole skeleton is affected by a generalized metabolic disorder.

The areas of pigmentation in this patient were said to have been present since birth, and were the characteristically flat, serrated, "coast-of-Maine," *café-au-lait* spots described by Albright⁽¹⁵⁾. They were unusual in being present on the opposite side from most of the bone lesions. Another unusual feature here was the history of a previous pigmentation on the posterior trunk, of which there remained no evidence.

Cutaneous pigmentation is the most frequent extraskeletal manifestation of the syndrome, and occurred in 60 out of 100 cases

of fibrous dysplasia reviewed by Belaval and Schneider⁽¹¹⁾. It may occur over extensive areas or in small spots, and represents an increase in the melanin content of the basal layer of the epidermis.

Endocrine manifestations, which consist mainly of puberal and somatic precocity, were not observed in this patient; and indeed precocious puberty rarely if ever occurs in males with this disease. This may be, as Albright and Reifstein⁽¹⁵⁾ suggested, because the mechanism which stimulates puberty in the male is different from that in the female. In the latter the follicle-stimulating hormone (FSH) of the anterior pituitary leads to the production of estrogen, whereas luteinizing hormone (LH) stimulates the formation of androgen in the male. Perhaps an anterior pituitary disturbance mediated through the hypothalamus permits release of FSH but not of LH. Such a mechanism would also be compatible with the frequently observed hastening of skeletal growth in some males as well as females, with early closure of the epiphyses and somatic maturity. Individuals thus affected are tall for their ages in early childhood, but as adults are often shorter than the average.

Neurologic changes in these cases can often be ascribed to the mechanical effects of bony overgrowth. The anosmia, poor vision, esophoria, decreased hearing, and tinnitus reported by this patient were probably due to direct pressure on the respective cranial nerves. Other changes in this case were uncertain and subjective (areas of hypesthesia), though objective neurologic abnormalities have been reported in several patients^(6,12,14). The mental deficiency in this man is not an uncommon feature of the syndrome⁽¹⁵⁾.

Increased incidence of *congenital defects* in this condition has been reported by several authors^(2,16); therefore, evidence of congenital heart disease was carefully sought but was not substantiated by autopsy. The cardiac condition of this patient was not related in any ascertainable way to the syndrome reported here.

Laboratory data: An elevated serum alkaline phosphatase level and a hypercalcuria (by Sulkowitch test) were the only pertinent clinical laboratory abnormalities noted in this case. The most consistent change in previously reported cases has been an ele-

vated alkaline phosphatase level, Dockery and others^(5f) having noted such a change in 19 of 24 cases in which the test was performed. In the majority of cases the levels of calcium and phosphorous in the serum are normal, as indicated in the numerous cases cited by Pritchard⁽²⁾. The hypercalcuria is not surprising, as individuals with fibrous dysplasia are frequently in negative calcium balance⁽²⁾.

Etiology

Despite the interest and efforts of numerous investigators, the cause of this disease still remains obscure. The most logical explanation remains that of Albright and his associates^(1,15), who postulated that the syndrome was a manifestation of a widespread neurologic disorder which caused the bone and pigment changes and through the hypothalamus initiated the endocrine disturbance. They felt that the mental deficiency and neurologic changes found in some of these patients supported this hypothesis. Albright also pointed out that another explanation suggested by Thannhauser⁽¹⁷⁾ could not be disproved — namely, that the overgrowth of bone at the base of the skull could possibly cause the endocrine changes through pressure on the hypothalamus.

Differential diagnosis

Hyperparathyroidism with osteitis fibrosa generalisata is differentiated from Albright's syndrome by its lack of skin lesions or precocious puberty, its rarity in childhood, and its associated weakness, indigestion, and renal manifestations. The bones in hyperparathyroidism are affected generally with osteoporosis, whereas the spotty distribution of the lesions of fibrous dysplasia contrast with normal bone elsewhere. The lamina dura is not disturbed in Albright's syndrome, but is commonly resorbed in parathyroid disease. The osteosclerotic lesions and the craniofacial asymmetries of fibrous dysplasia are absent from the latter condition. Serum calcium levels are usually high and phosphorous levels low in hyperparathyroidism; in polyostotic fibrous dysplasia they are usually normal.

Hand-Schüller-Christian disease (lipoid granulomatosis) differs from this syndrome by the presence of high serum cholesterol levels in the former, the absence of skin pigmentation and sexual precocity, the lack

of osteosclerotic lesions, and the frequent occurrence of diabetes insipidus.

Neurofibromatosis with skin pigmentation may be differentiated from polyostotic fibrous dysplasia by a family history of the former, the frequent presence of fibromata on the skin, the paucity of the bone lesions (which are usually confined to certain regions), the lack of osteosclerosis, and the relatively smooth "coast-of-California" borders of the skin lesions.

Treatment

There is no specific treatment for this condition. Attempts have been made to accelerate the advent of puberty, which usually arrests the progression of the disease, and Finkler and Cohn⁽¹⁸⁾ have reported a favorable result from the use of testosterone in one such case. However, the main therapeutic problem is that of correcting existing disabilities, which result most often from deformities of the lower extremities. These can frequently be dealt with successfully by orthopedic measures, both surgical and non-surgical.

Summary

A case of Albright's syndrome with autopsy observations is reported, and the syndrome is discussed. This case was characterized by the typical bone lesions of polyostotic fibrous dysplasia, skin pigmentation, minor neurologic manifestations, and mental deficiency.

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Cardiovascular Disease—Data on Mortality, Prevalence and Control Activities, is a new publication of the Public Health Service, U. S. Department of Health, Education, and Welfare. Designed particularly for use by people working in the heart disease field, the booklet provides information on cardiovascular-renal disease mortality and prevalence, and on heart disease control activities.

In general, data are included which permit comparisons among various population groups, among states, or among geographic regions. Results of case-finding where various populations were examined and various screening techniques used are also shown.

The 68-page booklet, issued as Public Health Service Publication 429, contains 36 tables. It was prepared by the Heart Disease Control Program of the Division of Special Health Services, Bureau of State Services, and single copies are available from the Heart Program.

* * *

Tuberculosis is still a communicable disease; isolation in a tuberculosis hospital is an essential factor in tuberculosis control. There is need for hospitalization because many cases of tuberculosis have a positive sputum for many months even with intensive chemotherapy. There is need to evaluate each case on an individual basis, and this can best be done . . . in the hospital in consultation with the thoracic surgeon. There is need for hospitalization during that period when sensitivity of organisms and effectiveness of treatment are being tested. Paul S. Phelps, M.D., The John N. Wilson Memorial Lecture, April 30th, 1954.

FACTORS PRODUCING EGO DISINTEGRATION IN THE AGED

EWALD W. BUSSE, M.D.

ROBERT H. BARNES, M.D.

and

LOUIS D. COHEN, Ph.D.

DURHAM

Recent advances in medical science have so increased the life span as to give us a large number of aged who present problems of medical concern in a number of new situations. Among these problems is the breakdown in self-esteem and of ego strength. We should like to discuss here the nature of this breakdown and its medical implications. Our remarks are based in part on a continuing study of some 500 subjects over the age of 60*.

Definitions

Before we begin it may be helpful to reach agreement on a few words. The most obvious and deceptively simple idea is that of *old age*. Just when is a man old? Is aging a function of physiologic change and decay, or of physical atrophy, sclerosis, or some combination of organ degeneration? Or are these factors quite secondary to questions of psychologic efficiency and alertness in memory, orientation, and judgment? Is the question one of sociological aging, represented by changes in and reduction of responsibilities for the management of the home or the job? Or is it perhaps some global combination of these different aspects of an individual which gives him the status of an aged person? The concept of aging is difficult to clarify⁽¹⁾, but for our purposes, we shall arbitrarily consider the age of 60 as the beginning of the period of the aged and avoid for the moment the complex issues raised above.

Another term we shall use is *ego*, by which we mean the thought expressed by William James⁽²⁾—"The ego is the *I* looking at the *me*." What James was discussing was two different aspects of the self—the perceiver and the perceived. Thus ego has a number of different attributes. For James the "I" that does the perceiving can select,

interpret, and order the world in such a way as to make the person comfortable and the world meaningful. This "I" has executive attributes: it exercises control; it orders and manages.

This is but one part of the concept of ego. The other part is the "me"—or the object perceived. The "me" represents the estimate that a person makes of his abilities. How able am I? What attributes do I have? Am I as clever—as strong—as well regarded as others? Do I meet the measure of people around me? The "me" is what the person sees when he regards himself.

Sources of Ego Strength

We believe that an important element in the social and emotional growth of a person is the way in which he regards himself. A healthy self-regard is built up over a period of years. Let us consider some of the factors which help build ego strength and a favorable self-regard.

Ordinarily heredity and physical well-being contribute enormously to the ego. Other sources of self-regard come from living habits—habits related to diet, nutrition, exercise, sleep, and cleanliness—all of which may tend to enhance the self-picture and round out the sense of well-being of the individual.

A third area contributory to the strength of the ego is the development of skill and efficient adjustment mechanisms for dealing with the problems of anxiety, guilt, and hostility. Those who fail to deal effectively with these problems are upset, tense, angry, frustrated, and often have a loss of self-esteem.

Still another area that contributes to a person's self-esteem concerns the satisfactions which come from living in a community, of being well regarded and well accepted. The stability of family relationships, the responsibilities of father to mother, of father and mother to children and other relatives, give clarity to the role of the person and give him a sense of belongingness and of importance. The stability of church and community relationships, the practice of having equal regard for the importance of the present and the meaning of the hereafter also provide a source of strength. As has been suggested by Mead⁽³⁾, the acceptance of the hereafter in the Balinese provides such a source of strength that elderly

From the Department of Psychiatry, Duke University School of Medicine, Durham, North Carolina.

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Balinese seek every opportunity to learn so they will be able to use their skills in the hereafter. Membership in community organizations, P.T.A., Rotary, the League of Women Voters, Golden Age societies, and the like tends to give people a sense of belongingness, of purpose, of contribution.

Thus heredity, living habits, psychologic skills, and social roles help people develop ego strength, facilitate their relationships to others, and provide such self-esteem as may give a sense of satisfaction and happiness.

Clinical Features of Ego Breakdown

Before considering the various factors leading to ego breakdown in the aged, a brief consideration of how such breakdowns appear clinically is appropriate. Statistically, *depressive reactions* are among the most frequent psychiatric disorders seen in the elderly. Most commonly the person recovers spontaneously without recourse to medical care, although occasionally he finds his way into the hospital, where his years often cause him to be falsely labeled as senile. The dynamic factors producing depressions in the elderly appear to be largely unrelated to either guilt or inwardly turned hostility, but seem an outgrowth of the person's perception of changes in his social and physical status, changes which threaten his self-regard⁽⁴⁾.

The second most commonly encountered major psychiatric disorder is that covered by the general diagnostic term *senile dementia*. This can be viewed as an example of ego breakdown in which organic changes in the central nervous system may be important; but, as Rothschild⁽⁵⁾ and others have pointed out, there is no consistent relationship between the clinical picture and the post-mortem findings. It should be noted, too, that more careful diagnostic work reveals that some of the disorders affecting hospitalized elderly people fall more properly into the category of *schizophrenic reactions* than into the senile dementia group. The existence of clinical episodes of schizophrenic reactions in the older age group have generally been ignored.

In addition to these more clearly defined types of breakdown, we see varying degrees of disturbed behavior in the elderly which have often been grouped under the heading,

"adjustment reaction of later life." The elderly person may become argumentative, hostile, withdrawn, suspicious, without being considered mentally ill. Adjustment problems of this sort, however, also represent clinical examples of partial breakdown in ego functioning.

Factors Influencing Ego Breakdown

Factors which lead to the breakdown of ego in old age represent in many ways the antitheses of the sources of ego strength which have already been reviewed. Kallman's studies⁽⁶⁾ support the thesis that a relationship exists between genetic factors and the type of ego breakdown seen during what he refers to as the involutional period. We all recognize, in our daily clinical experience, the existence of genetic factors as they relate to tissue aging in people of various families.

Intimate contact with the adjustment problems of elderly people very soon impresses one with the importance of the individual's mechanisms for coping with anxieties, guilts, hostilities — the mechanisms developed for dealing with *feelings*, both about one's self and about others. Adjustment techniques which fail to produce gratifying experiences and heightened self-esteem in earlier life become progressively more ineffectual, and the individual is largely defenseless against the major stresses of old age. He may then place increased reliance on memories and fantasies for his gratification, and live in the past⁽⁷⁾. The person with such defects is thus most vulnerable to the loss of external supports which come with age—loss of friends, relatives, jobs—and is defenseless against the threats of loneliness. The following case illustrates this quite graphically:

Case 1

The patient is a 65 year old white spinster who was first admitted to the hospital on the medical service because of a tearful, agitated behavior and the accentuation of a severe facial spasm. This spasm had first been noted six years ago, and its development coincided with a move to live with her sister and family. Initially it had consisted of a tic-like involvement of the right eye only, but particularly during the two weeks prior to admission it had spread to the entire right side of the face in an almost continual spasm. Two weeks before admission the patient had offered her only significant material possession—a small house she had inherited—to her beloved niece. This offer had been prompted by the niece's bitter complaints over her present living standards, made worse by the recent

arrival of a new child. For various reasons the niece was extremely upset by the offer of the house and rebuffed the patient with the remark, "No, I don't want it! I want to get away from here! You're always trying to push, push, *push* ! ! ! " The niece accentuated this by stomping loudly on an overturned dish-pan until it was ruined. The old lady retreated, but at 5 a.m. the following day, she awakened the niece to tell her that something was wrong with the baby, that it was crying. Such was found not to be the case. Progressively following this, the patient developed strong guilt feelings and believed she had injured her niece and her family. She became more confused and felt that the police were coming to take her away.

The patient had grown up on the farm as the next to the youngest of five siblings. Her social adjustment was not good, and she remained at home to take care of her aged parents, to whom she was very closely attached. She never dated, and as the years progressed she became more dependent on the family group. After her parents died she lived for some years with a lady-friend, but this friendship broke up and she moved into the relatively unsatisfactory environment of her sister's crowded home. Here the patient was constantly frightened by loud bickering and physical fighting between the family members. In this setting she developed the close attachment to the young niece whose rebuffs apparently were of real importance in the precipitation of this woman's psychotic episode.

In the hospital the patient retreated into a fantasy world of magic gestures and childish, regressive, acting-out behavior. Following a therapeutic regimen, which included intensive psychotherapy and electro-shock therapy, she became able to function for several months outside the hospital in a very withdrawn, paranoid state. Even this level of adjustment broke down and the patient had to be committed to long-term care in the State Hospital.

This case illustrates clearly how susceptible the ego is to breakdown when the mechanisms used to deal with problems of interpersonal relationships are poorly developed. It demonstrates the impact of loss of external supports with subsequently disastrous results. But even in the person with relatively effective adjustment patterns, the threats to self-esteem from loss of friends, relatives, social status, earning power, and the like are major problems for the ego to cope with, and when added to other stress can lead to ego breakdown.

Other stress includes such things as the usual physical, bodily changes associated with aging—loss of physical beauty and attractiveness and motor efficiency. The difficulties in accepting such usual changes in the body image constitute one of the major stresses on the ego⁽⁸⁾. If the more specific, and yet very usual, physical illnesses of old age are added, the stress becomes even greater. Such illnesses as prostatism strike close to the core of many a man's self-esteem, and arthritis often removes what remains of his diminishing motility. To this list could be added the genital and breast

tumors of the elderly female, the deforming skin cancers, the broken hips, the failing hearts, and the like, each necessitating major changes in the body image, in what the "I" sees when it views the "me."

On occasions the ability of the brain to function in a neurophysiologic sense is impaired. This impairment may be the result of a direct assault as a cerebrovascular thrombosis or hemorrhage, or of the more subtle one of failing circulation. The interrelation of these factors with the loss of external supports is well illustrated in the following case:

Case 2

The patient is a 72 year old retired farmer whose wife died three months prior to his hospital admission. He had never had serious problems with alcohol, but at this point he became very depressed and began to drink heavily. He discontinued the digitalis he had been taking for a number of years. Because of increasing confusion, he was brought to the hospital, where he was found to be disoriented as to time and place, with gross defects in both recent and remote memory. Speech was thickened, and physical examination revealed marked cardiomegaly, with pulmonary and peripheral edema. He was digitalized, given mercurial diuretics, and placed on a salt-free diet. His congestive failure disappeared rapidly and his mental state cleared, leaving few significant residuals. Follow-up over a two-year period revealed a reasonably satisfactory adjustment in the community.

Unfortunately, physical damage to the brain itself is seldom this easily reversed, and the features of ego breakdown at this level are readily seen. The ego is quite unable to evaluate effectively either the "me" or the outside world. Autistic logic and denial, strongly clouded by unconscious factors, replace reality testing, and the individual is left largely defenseless⁽⁹⁾.

One further stress affecting the ego of the aged needs consideration. To what extent does the imminence of death and the fear of it constitute a disorganizing force? Our own studies of this factor in elderly people are not final. The average elderly subject rather consistently denies that he fears death itself. It is as though death represents a far-off abstraction—not something real, concrete, to be experienced. This may well be the result of life-long avoidance and repression of a frightening unknown. This is the way it appeared to Cicero: "To disregard death is a lesson which must be studied from our youth up; for unless that is learnt, no one can have a quiet mind."⁽¹⁰⁾ Eissler⁽¹¹⁾, in his new book on the dying

patient, agrees with Freud that the basic fear is not of death itself, as an event, but of injury and mutilation. Our own experience is largely in agreement with this concept and indicates that the elderly person is more concerned about *how* he is to die than *when* or *if*. Thus the fears of terminal pain, disfigurement, dying alone, unattended, are more pressing and pertinent threats than death itself. We are all clinically aware of the disorganizing effects of chronic pain in the elderly cancer patient, for example. These fears, then, can constitute a major factor in the production of ego breakdown in the elderly.

Conclusion

The concept of the ego, a consideration of how it functions, and its sources of strength constitute a helpful frame of reference for considering adjustment in old age. Likewise a consideration of the forces which may lead to a disintegration of ego function is a useful approach to the understanding of adjustment failures and breakdown in the elderly. Further knowledge of the causes of such ego breakdown, and utilization of what we now know, can lead to both more effective mental hygiene planning for old age, and more rewarding management of those already disturbed. It becomes quite evident that it is impossible to understand adjustment failures of the elderly person without considering all the forces which are brought to bear upon him.

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Abstract of Discussion

Dr. Lloyd Thompson (Winston-Salem): The writers have given us a very clear picture of what

goes into building ego strength as well as what happens to wear down this strength, especially as age advances. Of course, ego breakdown can begin long before the age of 60. To me it seems helpful, and even optimistic, to think in terms of ego function rather than arteriosclerosis and brain cell atrophy. This approach is in contrast with the older attitude that medical treatment consists of treating a disease after it has occurred. This problem is a challenge to the general practitioner, the social worker, the nurse, and the community organizations that have to do with the aging process.

Let me emphasize that our Western culture fosters a rather dismal outlook for middle-aged folk as they approach old age. This is an external factor and is in contrast with the Balinese philosophy referred to in this paper.

There is little doubt concerning the need for an educational program to train people for adjustment to old age. This program should have the broad aim of anticipating and preventing the anxieties and maladjustments attendant on growing old. To me, it appears logical that any such effort should not be postponed until middle life or the age of 60, but should be a continuing health project from the time of conception onward.

The way in which a person meets and experiences the onslaught on his ego and the other stresses in old age and middle life depends not so much upon pathologic and normal physiologic changes as upon the shaping of the personality in the earlier years by the family, the community, and the general culture.

The development of social and emotional maturity, which implies a good balance among the id, the ego, and the superego and which should insure full enjoyment of the most in old age, really starts at the beginning of life.

Dr. Robert Strobos (Winston-Salem): I was struck by the statement that older people are less preoccupied with death as an entity than with the concept of self-mutilation that is involved; that the patient is more concerned with what will happen to his body than with the fact that he would die. I wonder if that could be confirmed by the Rorschach studies; if those studies were performed, would the self image or the death image be predominant.

Dr. Busse: I would like to ask psychiatrists how much can we help our patients. As I see our society, if middle-aged people perform well professionally and fulfill their obligations to their families, children, and so forth, we give them prestige. Unfortunately, since these are the major mechanisms for maintaining belief in themselves, they are doomed to failure. Before long the family moves out and there is a shift in professional function, and, unless the elderly person has other socially accepted devices for maintaining his self esteem, his position becomes difficult. I have heard a number of well adjusted people in our study say: "When I was young, people called me foolish for having interests outside the family." And yet, these interests have actually carried them through old age. As psychiatrists, I think that we can encourage our patients to develop these capacities before they become too old.

In the Rorschach tests, a large percentage of people give responses which indicate concern with slowing-down processes; it is less evident that they are preoccupied with death, *per se*. They are concerned with the changes of age rather than with reaching a total end. Most people make this quite clear. They say openly: "I am not afraid of being dead. What I'm afraid of is, who will take care of me when I am sick. How will I be protected against pain? If I could be assured that I would die with-

out pain, I wouldn't be afraid. "This attitude is prevalent in our society. Most people say, "If I have to die somewhere, I had just as soon die in a plane crash."

Dr. Strobos: I am surprised that the fear of death itself hasn't shown up more clearly. It seems to me to be a basic fear of all people.

From the floor: I think that fear of death is a phobia, a relic of medieval times. I don't think it is as prevalent today. At least it is not expressed.

Dr. Barnes (closing): I agree with Dr. Thompson's remarks. The question is when to start studying people. We have by no means decided this point. One of our next moves should be to begin one decade younger. Even this doesn't answer all the problems, however.

I am reminded of the story of Oliver Wendell Holmes and Chauncey Depew walking home together. Holmes was approximately 97. A good-looking girl came down the street, Holmes turned around, watched her a good ways, and then remarked to Depew, "Oh, to be 70 again!"

DIPHTHERIA—A CONTINUING NORTH CAROLINA HEALTH PROBLEM IN 1954

JACOB KOOMEN, JR., M.D.*

and

CHARLES M. CAMERON, JR., M.D., M.P.H.†
RALEIGH

The persistence of a high incidence of diphtheria in North Carolina has been a matter of concern to practicing physicians and public health workers for many years. While the number of cases had been decreasing more or less steadily for a decade, a dramatic increase in 1945 focused attention upon the disease. During that year the case rate increased in North Carolina by 127 per cent, as compared with an increase of only 32 per cent for the United States as a whole. Of 637 patients studied by Stevick⁽¹⁾ at that time, 63.9 per cent had received no immunization to the disease, and another 20 per cent had had but one dose of antigen. He stressed the need for an effective immunization program in North Carolina.

A study of diphtheria carried out in 1953 revealed that while North Carolina's case rate had fallen to a new low point (3.1 cases per 100,000 population)⁽²⁾, it was, nevertheless, twice that of the nation as a whole. It

Table 1
Reported Diphtheria Case and Death Rates
in North Carolina

Year	No. cases	No. deaths	Cases per 100,000 population	Deaths per 100,000 population	Case fatality ratio (per cent)
1935	1,720	162	50.9	4.8	9.4
1936	2,347	188	69.0	5.6	8.0
1937	2,056	160	59.9	4.8	8.0
1938	2,442	168	70.3	4.9	6.9
1939	2,368	164	67.0	4.8	6.9
1940	1,125	107	31.5	3.0	9.5
1941	1,629	83	44.4	2.3	5.1
1942	1,187	76	32.4	2.0	6.4
1943	801	53	21.7	1.4	8.6
1944	665	40	18.5	1.0	6.0
1945	1,475	96	42.0	2.5	6.5
1946	590	46	16.2	1.3	7.8
1947	751	32	20.2	.86	4.3
1948	506	30	13.3	.79	5.9
1949	550	25	14.2	.65	4.5
1950	499	27	12.3	.67	5.4
1951	373	18	9.0	.45	4.7
1952	202	9	4.8	.22	4.5
1953	129	6	3.1	.14	4.6
1954	125	8	2.9	.19	6.4

is worth noting that in 1945 the North Carolina rate was three times the national average, while in 1952 it was two and one half times higher.

In an effort to determine the responsible factors, the present study was initiated by the Division of Epidemiology of the North Carolina State Board of Health. This paper presents data obtained from an epidemiologic investigation of all cases of diphtheria reported as having onset in 1954.

Method of Study

Following receipt of official notification of the diagnosis, a questionnaire was mailed to the local health officer requesting information relative to (1) laboratory studies carried out in each case; (2) immunization, including the date; (3) the dates of booster doses of antigen, if given; (4) the source of infection, if known, and (5) the numbers and names of secondary cases. These data, obtained from health department records, private physicians, hospitals, and patients' records, represent information on each of the 125 reported cases.

Case and Death Rates

Data relative to case and death rates for diphtheria in North Carolina in the period 1935-1954 are presented in table 1. The number of cases in 1954 is the lowest yet recorded. The case rate, 2.9 cases per 100,-

*A field epidemiologist assigned to the Division of Epidemiology, North Carolina State Board of Health, Raleigh, North Carolina, by the Communicable Disease Center, Public Health Service, U. S. Department of Health, Education and Welfare, Atlanta, Georgia.

†Chief of the Communicable Disease Control Section, Division of Epidemiology, North Carolina State Board of Health. Present address: Chapel Hill.

Table 2
Case Rates Per 100,000 Population
North Carolina, South Atlantic States,
and the United States
1949-1953

Year	Rates per 100,000 population		
	North Carolina	South Atlantic States	United States
1949	14.2	9.5	5.4
1950	12.3	7.5	3.9
1951	9.0	5.4	2.6
1952	4.8	4.4	1.9
1953	3.1	3.7	1.5

North Carolina data from Statistics Section, North Carolina State Board of Health

Other rates from Communicable Disease Center

000 population, is also the lowest recorded.

Eight deaths attributable to diphtheria were reported during the year. Only once, in 1953, when 6 were recorded, have fewer deaths been attributed to this cause. The death rate is calculated as 0.19 per 100,000 population—the second lowest so far recorded.

Although no striking changes have been apparent, there has been a somewhat irregular decline in the ratio of diphtherial mortality to cases in the past 20 years. The highest percentage recorded in this period was 9.5 per cent, in 1940, and the lowest, 4.3, in 1946. The data for 1954 show that 6.4 per cent of the cases ended fatally, a slightly higher percentage than that recorded in the past several years.

Table 2 shows the case rates for North Carolina, the South Atlantic States, and the United States for the past five years. In 1953, the last year for which complete data are available, the case rate for the state was 3.1 per 100,000, for the South Atlantic States, 3.7, and for the United States, 1.5. The 1953 case rate in North Carolina is seen to be lower than the average case rate for the South Atlantic States for the first time in the five-year period presented.

Geographic and Seasonal Distribution

The number of cases in each of the eight counties reporting the largest number of cases per county are given in table 3. While diphtheria was reported in 41 of North Carolina's 100 counties, one third (34.4 per cent) of the total cases in the state were recorded by two counties, Henderson and Lenoir, listing 23 and 20 cases, respectively. The eight counties listed reported 59.2 per cent of the recognized cases, indicating that diphtheria continues to be a localized health

Table 3
Number of Reported Cases and Case Rates
of Eight Counties Reporting Largest
Number of Cases

County	No. Cases	Rate per 100,000 population
Henderson	23	69.8
Lenoir	20	42.6
Gaston	8	6.6
Wayne	6	8.9
Transylvania	5	31.3
Edgecombe	4	7.6
Martin	4	13.9
Pitt	4	6.2

problem⁽²⁾. Case rates of 69.8, 42.6 and 31.3 per 100,000 population were calculated for Henderson, Lenoir, and Transylvania counties, in the order given. Of the eight counties reporting the largest number of cases in 1954, five were among the eight counties reporting the largest number of cases in 1953.

The seasonal distribution of the 125 cases is seen in table 4. April led with 20 cases; only 2 cases each were reported in July and November. The average number of cases reported per month was 10.

Table 4
Reported Incidence by Months

Month	Cases
January	8
February	13
March	19
April	20
May	7
June	3
July	2
August	5
September	17
October	15
November	2
December	14
Total	125

Age, Sex, and Race Distribution

Table 5 shows the distribution of cases by age and race. Eighty of the patients were white, a color specific case rate of 2.5; and 45 were non-white, a color specific case rate of 4.0 per 100,000 population.

Distribution of cases among whites and non-whites in the age groups from birth through 9 years was equal. It can be seen that 38.4 per cent of the total patients were less than 5 years of age, and that 60.8 per cent had not yet reached the age of 10 years. In the white group, however, 30 per cent of the patients were 4 years of age or less and 47.5 per cent were 9 years of age or

Table 5
Case Distribution by Age and Color
1954

Age (Years)	White	Non-white	Total
Under 1	3	3	6
1-4	21	21	42
5-9	14	14	28
10-14	10	2	12
15-19	5	1	6
20-24	3	1	4
25-29	8	0	8
30-39	9	3	12
40-49	4	0	4
50-59	2	0	2
60-69	1	0	1
Totals	80	45	125
Percentages	64.0	36.0	100.0

Table 6
Case Distribution by Age and Sex
1954

Age (Years)	Male	Female	Total
Under 1	3	3	6
1-4	21	21	42
5-9	17	11	28
10-14	4	8	12
15-19	5	1	6
20-24	3	1	4
25-29	4	4	8
30-39	3	9	12
40-49	0	4	4
50-59	1	1	2
60-69	0	1	1
Totals	61	64	125
Percentages	48.5	51.5	100.0

less, while in the non-white group 53.4 per cent were 4 years of age or less and 84.5 per cent were less than 10 years of age. A disparity between the two groups is also seen in the patients beyond 20 years of age. This group includes 30 patients, 27 of whom were white and 3 non-white. In the past 20 years several states have shown an increasing proportion of cases in the group beyond 20 years of age, according to Dauer⁽³⁾.

Table 6 shows that the distribution between the sexes is approximately equal. No consistent differences are seen between the two sexes until the older age groups are examined. In contrast with the small number of males (4) in the group beyond 30 years of age is the relatively large number of females⁽¹⁵⁾.

Distribution of Diphtheria Deaths by Age and Race

Table 7 shows the distribution by age and race of 8 patients dying of diphtheria. The three non-white children were 4 years of age or less; the 5 white children ranged from 1 to 9 years of age. Six were boys; two were girls.

Table 7
Distribution of Deaths by Age and Color

Age (Years)	White	Non-white	Total
Less than 1	0	1	1
1-4	3	2	5
5-9	2	0	2
Totals	5	3	8

Laboratory Studies

In 109, or 87.2 per cent, of the 125 reported cases an effort was known to have been made to support the clinical diagnosis with laboratory proof, as shown in table 8.

Positive laboratory evidence was found in 100 of the 109 cases examined, as revealed in table 9. Eighty per cent of the total clinical diagnoses were substantiated by laboratory findings. In 24 of the 100 proved cases, laboratory diagnosis was based solely upon evidence obtained from direct microscopic examination of a smear or smears taken from the infected area. The interpretation of the findings in such smears may be extremely difficult.

The shortcomings of this method of diagnosis have been amply cited by Mueller⁽⁴⁾.

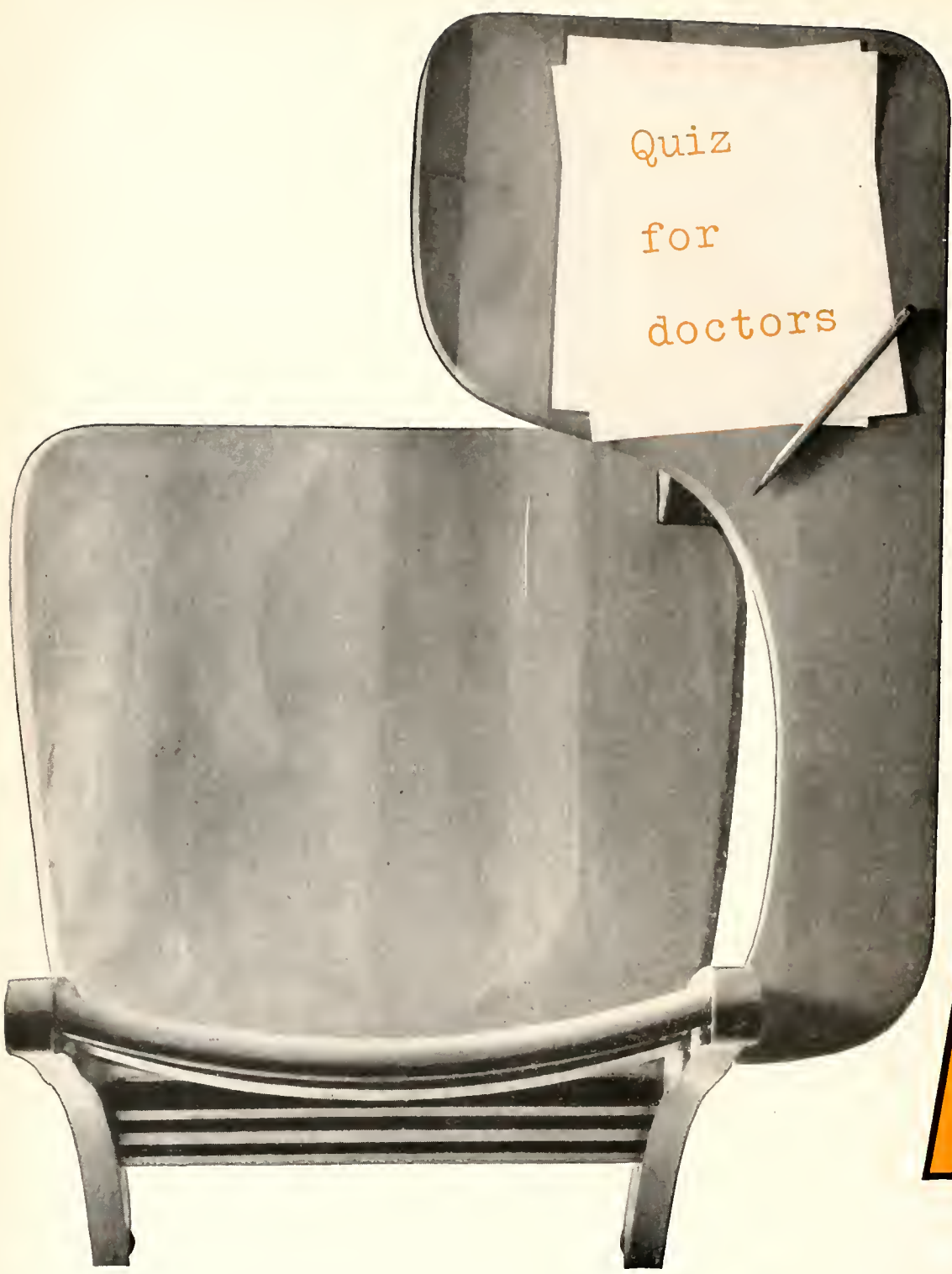
Table 8
Laboratory Studies of 125 Reported Cases

Laboratory	Methods	Cases	Per cent of total
Local laboratory	Smear only	24	19.2
Local laboratory	Culture only	18	14.4
Local laboratory	Smear and culture	26	20.8
State Laboratory of Hygiene	Culture	37	29.6
Out-of-state laboratory	Smear and culture	4	3.2
No laboratory studies performed		14	11.2
Unknown		2	1.6
Totals		125	100.0

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Table 9
Results of 109 Laboratory Cases Studied
by Laboratory

Laboratory	Methods	No. cases	No. positive reports
Local laboratory	Smear only	24	24
Local laboratory	Culture only	18	18
Local laboratory	Smear and culture	26	25
State Laboratory of Hygiene	Culture	37	29
Out-of-state laboratory	Smear and culture	4	4
	Totals	109	100
Percentage of total cases reported by laboratory as positive			80.0
Percentage of total cases reported by laboratory as positive on culture			60.8

Smears doubtfully positive are often interpreted as positive because it is safer to give treatment when not clearly indicated than to withhold it if the need possibly exists. Using the isolation and identification of the causative agent, *Corynebacterium diphtheriae*, as the index of laboratory proof, 76, or 60.8 per cent, of the 125 clinical diagnoses were confirmed. Twenty-nine positive isolations in cases of suspected diphtheria were made at the North Carolina State Laboratory of Hygiene.

Immunization

Table 10 presents the diphtheria immunization histories of 118 out of 125 patients on whom complete data were available. Seventy-two, or 61 per cent, were known to have received no immunization against this disease. It is noteworthy that this percentage is very close to the 63.9 per cent found to have received no immunization in the series of patients examined by Stevick in 1945⁽¹⁾. Thirty-nine per cent of the patients received one or more doses of an appropriate diphtheria antigen. Only 16 patients, or 13.8 per cent, had received booster doses of toxoid.

A comparative analysis of white and non-white patients given in tables 11 and 12 shows a striking difference in the percentage of each known to have received one or more immunizing doses; 50.2 per cent of the white patients and 20 per cent of the non-white patients for whom data were available had received some immunization. Twelve of the 80 white patients and 4 non-white patients had been given booster immunization.

A brief examination of the immunization records of the 8 patients who died shows,

Table 10
Immunization Records of 125 Cases

Immunization record	No. cases	Per cent of total
No history of immunization	72	57.6
One dose of toxoid	3	2.4
Complete basic immunization	43	34.4
Unknown	7	5.6
Totals	125	100.0

Table 11
Immunization Records of 80 White Patients

Immunization record	No. cases	Per cent of cases
No history of immunization	36	45.0
One dose of toxoid	2	2.5
Complete basic immunization	35	43.7
Unknown	7	8.8
Totals	80	100.0

Table 12
Immunization Records of 45 Non-white Diphtheria Patients

Immunization record	No. cases	Per cent of total
No history of immunization	36	80.2
One dose of toxoid	1	2.2
Complete basic immunization	8	17.8
Totals	45	100.0

Table 13
Immunization Records of 8 Patients Dying of Diphtheria

No immunization	6
Partial basic immunization	1*
Complete basic immunization	1†
Booster immunization	0

*This patient, a 6 year old mongoloid, received two 0.5 cc. doses of toxoid in 1948.

†The patient, a 4 year old child, was immunized in 1950.

in table 13, that only one had received complete immunization to diphtheria; 1 had received a partial course, and 6 had received no immunization. The 2 patients receiving diphtheria toxoid had been immunized in

the first few months of life; neither had subsequently been given a booster dose of diphtheria antigen.

Relationship of Cases to Other Cases and Carriers

Although the number of cases of the disease in adult white women was relatively high, not one of these cases was secondary to a recognized diphtheria case in the same household.

Two three-case family outbreaks of diphtheria were seen. In each instance one member of the family served as the primary case, and the second and third cases were secondary to it.

Six two-case family outbreaks occurred. In one of these families the second case was obviously related secondarily to a case in the family; in the remaining five instances the familial cases occurred more or less simultaneously.

Six cases were shown to have had contact with individuals subsequently proved to have been carriers of *C. diphtheriae*. In 114 instances the source of infection was not determined.

Summary and Conclusions

North Carolina in 1954 had the lowest incidence of diphtheria yet recorded, but it is still above the average for the United States.

Eight counties recorded almost 60 per cent of the reported cases. Fifty-nine counties did not report a single case.

The case rate in the non-white population was approximately one and one half times that of the white population.

Of the entire group, more than one half of the patients were less than 10 years of age. Of the non-white group, approximately 85 per cent were less than 10 years of age. One third of the white patients were more than 20 years of age. In patients above the age of 29 years, females outnumbered males 4 to 1.

All deaths reported from diphtheria were in children less than 10 years of age. Six of the 8 were less than 5 years of age.

The clinical diagnosis was supported by some type of laboratory evidence in four fifths of the reported cases. Positive cultures were obtained from 60.8 per cent.

The failure to obtain basic and follow-up

immunization, especially among the non-white population, plays a major role in the maintenance of the high diphtheria case rate.

Excellent laboratory facilities are within easy reach of all physicians practicing in North Carolina. Greater emphasis must be placed on the necessity for proper bacteriologic study of all suspected cases of diphtheria.

Acknowledgement

The authors wish to thank the local health officers, local health department staffs, practicing physicians of North Carolina, and personnel of the North Carolina State Laboratory of Hygiene, for their cooperation in making this study possible.

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Consideration should be given to the choice and use of nurses. Certain physicians have a bad reputation among nurses, usually for attaching blame to them when it is undeserved. Either the physician is so vague in giving orders that whatever the nurse does turns out to be wrong or he is so rigid in his requirements that the nurse is afraid to adapt the orders to the real situation. Every physician should regard the nurse as a member of an allied profession that has its own standards of conduct and procedure beyond which she cannot be expected to go. . . . Because of her watchfulness the nurse's judgment about alarming or unusual symptoms can be of great help to the physician, and her warning in their incipency often saves him from the embarrassment of overlooking serious complications. A doctor who closes his ears to such suggestions or brushes them off impatiently is not making full use of his resources. The skillful physician learns to evaluate the individual capacities of his nurses and apply principles of personnel management to the placement, especially for private duty, of certain nurses in certain types of cases or in certain personality problems among his patients. No medicine or regimen of treatment can approach in effectiveness the proper choice of the right nurse for the particular patient. And nothing can so ensure the continuity of effective relations as expressions of appreciation of the nurse when her work deserves them. By the same token, she should not be reprimanded in the patient's presence any more than one would reprimand another physician in the same circumstances. Good care of the patient requires the confidence that only mutual courtesy can provide.—Howe, H. F.: The Use of Community Resources, New England J. Med. 250:368 (March 4) pound of atropine will provide sufficient doses to treat one million people.

THE MANAGEMENT OF CONGESTIVE HEART FAILURE

FRANK P. WARD, M.D.

LUMBERTON

The management of congestive heart failure is one of the most interesting therapeutic problems with which the physician is faced. Each case presents its own diagnostic and therapeutic problems, no two cases are exactly alike; and often successful treatment calls for entirely different management from that followed in preceding cases. Admittedly, congestive heart failure in the ordinary sense of the word is not curable. At the same time a great deal can be done to prolong life, give relief, and lengthen the productive years of an individual so affected.

It is not the purpose or scope of this paper to discuss the etiology of congestive heart failure, but it is realized that no successful management can be undertaken without recognizing that numerous etiologic agents can be, and often are, responsible for the production of the condition.

The management of congestive heart failure, although varying to some extent from case to case, requires certain basic therapeutic procedures. The treatment may be divided into the four following phases:

1. Initial therapy
2. Long term therapy
3. Treatment of acute pulmonary edema
4. Complications of therapy.

Initial Therapy

Oral digitalis is the most valuable single drug. It has been said that the more skillfully digitalis is used, the less need there will be for any additional drug. This is very often the case. First used by Withering in the eighteenth century and rediscovered by MacKenzie in modern times, it stands eminently as the drug of choice in most cases of congestive failure. Now available in a wide number of acceptable glucosides, it offers the physician a wide range of choice. In my own practice I have most often used digitoxin, beginning with 0.15 mg. three times daily and continuing this regimen usually from three to five days or until early toxic symptoms or evidence of improved cardiac function are present. It is well to

remember the original advice given by Withering: "Let it be continued until it acts on the kidneys, the stomach, the pulse, or the bowels."

Mercurial diuresis is an excellent adjunct even in the initiation of therapy, particularly in the patient with marked edema. Given in 40 to 80 mg. doses, the mercurials are now available in a wide variety of safe preparations for subcutaneous or intramuscular injection, without the hazard of intravenous administration. Acting on the tubular epithelium, they block the reabsorption of the chloride ion, the sodium ion and, consequently, of water. In the normal kidney they are eliminated from the tubular epithelium in a period of 24 to 48 hours. In the beginning, a dose of 40 to 80 mg. given every other day until the patient is free of edema is ordinarily a safe, effective schedule.

Sodium restriction certainly should be insisted upon at the initiation of therapy, although one must be aware of the occasional difficulty resulting from too vigorous mercurial diuresis and too marked sodium restriction. From a practical standpoint many patients will not restrict their intake of sodium, and the physician thus becomes more dependent on diuretics and other measures.

Rest in some form is usually a must in the initiation of treatment of the patient with congestive failure. Unless some acute vascular episode has occurred, it is seldom desirable to keep the patient strictly in bed even during the early phases of therapy. In fact, Levine has shown that "arm chair" rest may at times actually reduce the work load on the heart. Certainly the control of dyspnea is less a problem in the semi-recumbent position than in the horizontal position.

Sedation is frequently necessary and almost always desirable in the early stages of management. The practicing physician knows that without sedation many of these hard-driving, obese, hypertensive patients who are suddenly forced to rest are indeed miserable creatures. Small amounts of barbiturates are usually adequate. In more severe congestive failure with marked dyspnea and anxiety, however, morphine for a few nights still gives results that are superior to those of any other drug.

Long Term Therapy

There is not a great deal of difference between initial and long term therapy, except that digitalis dosages need more expert control and complications must be more carefully watched for in the latter. Maintenance doses of digitalis should be continued, these usually being the equivalent of 0.15 mg. of digitoxin daily. One must realize, however, that there is a wide variation in the maintenance dosage. In my own practice I have seen variations from a low of 0.05 mg. twice weekly to a high of 0.6 mg. daily.

Diuretics are often necessary in the control of edema and at times in the control of dyspnea, particularly in the prevention of paroxysmal nocturnal dyspnea. Parenteral mercurials still seem to be the drug of choice in most cases. Depending on the patient's response, the physician must determine the maintenance dosage, many of the patients being able to go two weeks and even longer between injections. Oral mercurials are now available, although their absorption and action is somewhat less predictable and the possibility of mercury poisoning is considerably greater.

Recently the addition of Diamox and Mictine has given the physician a wide range of choice in determining the diuretic most suitable for the patient. My personal experience with these drugs has not been great enough to comment on their relative merits.

It is well known that mercurials can be given over a long period of time with reasonable safety, and I would like to report briefly the two following cases as examples of benefit obtainable from long term parenteral mercurial diuresis.

Case Reports

Case 1

This 56 year old Greek cook first came under my care June 24, 1948, with a history of hypertensive disease for at least two years, having had a cerebral thrombosis with partial hemiplegia in 1946. On initial examination he was found to be hypertensive, with a blood pressure of 230 systolic, 140 diastolic. He was fibrillating rapidly, and had marked cardiomegaly, rales at both bases, an enlarged liver, and peripheral edema. He was admitted to the hospital, digitalized, and given mercurial diuretics with good response. Over a period of approximately six years he subsequently received 2 cc. of mercurial diuretic twice weekly, maintaining his digitalis. Admittedly, he was difficult to control. He ate indiscriminately, omitted the digitalis frequently, and often indulged in excesses. His office visits during this period were interrupted by six hospital admissions for acute pulmonary edema.

During his last years he was able to work a fair amount of the time. On occasion he would walk from his house to the office, a distance of some three miles, and then walk back after receiving his mercurial diuretic. He died suddenly June 17, 1954, at the end of an approximate five-mile walk to visit one of his sons.

Case 2

This 70 year old white man first came under my care January 27, 1946, with a history of congestive failure with hypertension for a period of some three years. He was already taking digitalis, but was largely incapacitated because of edema and dyspnea. At the initial examination the blood pressure was 198 systolic, 96 diastolic, and the weight 184. Digitalis was continued, and he was given 2 cc. of a mercurial diuretic twice weekly. He has continued getting this drug twice weekly to the present time. On the rare occasions when misses a dose, he gains from 5 to 10 pounds in as many days. He was not working when he started treatment and still is not working, but he has been maintained comfortably over these years with digitalis plus mercurial therapy.

Sodium restriction, as discussed under initial therapy, is highly desirable. Again it is impossible to force the patient in many instances to maintain a low sodium diet. In the long term therapy one must, of course, be aware of the possibility of sodium depletion.

Weight control is extremely important in long term therapy, and it is wise to bring the obese patient to a normal or even slightly subnormal level. The benefit obtained in some patients merely by weight reduction is remarkable. Those who refuse to cooperate in dietary control often do so involuntarily if digitalis keeps them slightly nauseated for a short period.

Underlying Conditions

The treatment of the underlying cause of congestive failure is always important, and at times becomes paramount. So often in office practice we fall into the habit of making a diagnosis of congestive heart failure without establishing the cause. Many pitfalls lie in such an approach, as many cases of congestive failure cannot be successfully treated until the underlying etiologic disease is recognized and corrected. I would like to mention the following frequently overlooked conditions:

1. Hyperthyroidism
2. Myxedema
3. Anemia
4. Subacute bacterial endocarditis.

Dr. Mees and I have recently treated a case of severe myxedema with ascites and pericardial effusion. At the beginning of therapy this patient's protein-bound-iodine

was 1.5. Under thyroid medication she has become free of edema and shows marked improvement.

Control of work and play is often one of the most difficult measures to enforce. Obviously, very few of these patients should spend the rest of their lives in a rocking chair. Certainly most of them feel that such an existence would not be worth while. It is, however, extremely important to impress on them the necessity of moderation in work, play, and all details of their daily existence. To these people moderation is one of the biggest words in the English language.

Treatment of Acute Pulmonary Edema

Few medical emergencies are greater than the severe case of acute pulmonary edema. Life is untenable unless the episode is brought under control. For immediate relief there is still no available drug more valuable than morphine judiciously used, and my own practice ordinarily is to give this drug as the very first step in the management of acute pulmonary edema.

Oxygen given by mask is also a valuable therapeutic agent which in itself can be life-saving. Positive pressure oxygen at times is even more desirable, although there are some patients who do not tolerate the sense of constriction which this method produces.

Aminophylline given slowly by vein in doses ranging from 0.25 to 0.5 Gm. almost immediately affords the patient some relief from the labored, wheezing respiration. Some of us have been unfortunate enough to have the patient die with the needle in the vein, but I still feel that it is a very valuable drug when properly used.

Reduction of the circulating blood volume is often necessary to the control of edema. The relief with a 500 cc. venesection or peripheral tourniquets or both is often dramatic. The mechanical difficulties of withdrawing the viscid blood at times makes it more feasible to depend on the peripheral tourniquets.

Digitalis again must be used in the treatment of acute pulmonary edema, but I feel that it is often well to institute other therapeutic procedures first. In such cases a rapid-acting intravenous preparation is preferable. Lanatoside C in an average dose of 1.6 mg. is quickly effective. It is sometimes desirable to give half or three quarters of this

dose at the initial injection and the remainder in four hours. This is particularly true if it is not known whether previous digitalis therapy has been instituted.

Also during the acute attack of pulmonary edema the mercurial diuretics can be given. In an amazing short time diuresis will begin, reducing the circulating blood volume.

Complications

As in all therapeutic procedures, complications do arise and at times must be looked for in order to be recognized.

The most frequent complication, particularly in the long term management, are those associated with mercurial therapy. The reactions to these drugs are not common except those occurring with excess diuresis, the accompanying hemoconcentration, and electrolyte loss. In the milder cases these reactions can be treated simply by discontinuing the mercurial for a period of time. The more severe reactions require the intravenous administration of hypertonic sodium chloride, ammonium chloride, or potassium chloride, depending on the electrolyte imbalance.

At times other reactions to mercurial diuretics, including stomatitis, hemorrhagic colitis, nephrosis, and the various sensitivity reactions are seen. Fortunately these are rare.

Summary and Conclusion

The management of congestive heart failure is a complex problem, with many individual variations requiring the intelligent cooperation of both physician and patient. Of all the available measures, digitalis, mercurial diuretics, dietary restriction, and reduction in activity are the most important features.

The pathogenesis of iatrogenic heart disease is quite clear. By definition, the etiologic agent is the physician. From him the patient receives the impression that he has heart disease. This may occur through direct statements or acts to that effect, or indirectly by the patient's interpretation of certain words or acts of the physician. It is a well known fact that the common reaction of the patient on receiving a diagnosis of heart disease is fear. Individuals vary in their responses, depending upon their personal makeup, their life experience and their situational reactions. But the general tendency of fear is to produce the combination of psychologic and physiologic manifestations commonly termed "anxiety neurosis."

CURRENT CONCEPTS REGARDING THE MANAGEMENT OF PREMA- TURE SEPARATION OF THE PLACENTA

JULIAN BRANTLEY, M.D.
ROCKY MOUNT

The management of the obstetric patient with premature separation of the placenta has in the past been somewhat controversial, the controversy centering principally around whether the patient should be delivered vaginally or by cesarean section. The choice of a method was usually determined by the experience of the physician and was made in the hope of reducing maternal mortality from profuse and uncontrollable hemorrhage. With the development of the knowledge that uncontrollable hemorrhage in premature separation of the placenta is often due to the depletion of plasma fibrinogen, it is now realized that the method of delivery is less important than the condition of the patient at the time of delivery, with special regard to the coagulability of blood. In the past five years numerous articles have appeared in medical literature dealing with the development of afibrinogenemia in abruptio placentae. The purpose of this paper is to review the problem as it relates to the management of premature separation of the placenta in a small general hospital.

The Blood-Clotting Mechanism

A resumé of the blood clotting mechanism will be beneficial in discussing the development of afibrinogenemia in abruptio placentae. Howell's theory, which is perhaps the most widely accepted one, is as follows:

1. Prothrombin and antiprothrombin are normally held in a state of equilibrium.
2. In the presence of thromboplastin the antiprothrombin is neutralized and prothrombin is liberated.
3. In the presence of calcium salts the prothrombin is activated to form thrombin.
4. Fibrinogen in the presence of thrombin is deposited as fibrin.

In abruptio placentae thromboplastin or a thromboplastin-like substance gains entrance into the maternal circulation from the placenta or decidua. It is felt that this occurs when a retroplacental clot is large

enough to cause a rise in intrauterine pressure exceeding the pressure in the venous sinusoids of the myometrium. This differential in pressure forces the thromboplastin-like material into the maternal circulation, causing intravascular deposition of fibrin, which in turn results in a deficiency of fibrinogen in the general circulation. Normally the fibrinogen level in the gravid woman is around 300 mg. per 100 cc. The critical level for fibrinogen depletion is said to be 50 mg. per 100 cc. Below this point bleeding from the uterus, and possibly from other mucosal and serosal surfaces, is likely to be fatal.

Use of the Clot Observation Test

Clinically, the most expedient method of determining the presence or absence of a defect in the blood clotting mechanism is the clot observation test. First, the clotting time is determined by the Lee-White method, and the clot is then incubated at 37 C. for 24 hours. The absence of clot formation signifies a fibrinogen level below the critical point of 50 mg. per 100 cc. More often a clot will form within the normal time of 12 minutes, but after incubation will show evidence of fragmentation and dissolution. If this occurs within one hour, it indicates that the fibrinogen is below the level for adequate hemostasis. A clot dissolving within 24 hours indicates a decrease in fibrinogen or the presence of a fibrinolysin. It would be more accurate to determine the plasma fibrinogen level, but this is a longer procedure and many laboratories are not equipped to carry it out.

The degree of defibrinogenation in abruptio placentae bears a direct relationship to the degree of placental separation. It is felt that the larger the retroplacental clot, the greater will be the intrauterine pressure. The greater the intrauterine pressure, the larger the amount of thromboplastin-like material forced into the maternal circulation. For this reason, rupture of the amniotic sac will arrest the process of defibrinogenation by reducing the intrauterine pressure. From these facts, it becomes apparent that the proper management of abruptio placentae hinges on properly evaluating the severity of the case.

Management

Mild cases

In mild cases of premature separation of

the placenta, maternal mortality is negligible and the physician is concerned primarily with salvaging the infant. If the infant is viable, the patient should be examined under proper conditions and the membranes ruptured. The amniotomy immobilizes that portion of the placenta which is separated, promoting local thrombosis and preventing further hemorrhage and separation. If the clot observation test is normal and there is no evidence of increasing bleeding or fetal distress, vaginal delivery should be anticipated. The judicious use of pituitary extract should be considered in the induction of labor. In the event of increasing bleeding or signs of fetal distress, the patient would best be delivered by cesarean section in order to save the infant. It is important that the clot observation test be normal and that blood loss be replaced before any surgical procedure is started.

Severe cases

Maternal mortality occurs in the 5 to 10 per cent of cases which make up the severe form of abruptio placentae. Here the physician is concerned entirely with saving the mother and the infant is given little consideration. Indeed, in the vast majority of cases the infant will already have succumbed.

The immediate concern upon admission to the hospital is replacement of blood. Adequate doses of morphine should be given at once. At the time that blood is drawn for cross-matching and blood counts, a specimen should be taken for clot observation. Should the blood fail to clot, fibrinogen should be administered in addition to blood, the initial dose being 2 to 4 Gm. Additional fibrinogen should be administered as indicated on the basis of the clot behavior. Should the clot observation test be normal, only blood is given.

After the patient has satisfactorily responded to the administration of blood, a vaginal examination under double set-up should be made. Regardless of the status of the cervix, amniotomy should be done. Thereafter the physician should await the onset of labor with anticipation of a normal vaginal delivery. Again, the judicious use of pitocin to initiate the onset of labor should be considered. The clot observation test should be carried out at frequent intervals (perhaps hourly) to make certain that defi-

brinogenation is not progressing. If after a period of, say, 10 to 12 hours, there is no indication of the onset of labor and the patient's condition is satisfactory with regard to blood replacement and blood coagulation, cesarean section may be considered.

Review of Cases

From 1949 through 1954 there were 3,570 deliveries at Park View Hospital in Rocky Mount, among which were 19 cases of severe abruptio placentae. There were no maternal deaths in the 19 cases. The fetal loss was 100 per cent. All cases were managed conservatively, with vaginal delivery. The treatment consisted of administration of morphine, replacement of blood, and amniotomy. For the greater part of this time we were not aware of the possibility of afibrinogenemia, and no studies in that regard were carried out. More recently we have been using the clot observation test in the routine management of cases of abruptio placentae. There have been evidences of fibrinogen depletion, but not to a critical level. In no case have we had to resort to the administration of fibrinogen. Recently we have observed 2 patients who showed definite derangement of the clotting mechanism, but who were managed successfully by the adequate replacement of blood alone. Brief resums of these cases are given below:

Case Reports

Case 1

The patient was a 34 year old Negro woman, gravida 6 para 3, whose estimated date of confinement was June 7, 1955. She was admitted to the hospital at 6 a.m., April 3, 1955, with the complaint of sudden, profuse, bright vaginal bleeding having occurred at 4 a.m. There had been no abdominal pain at the time of admission. Her family physician stated that there had been no evidence of toxemia during the prenatal course. The past history was negative.

Examination upon admission showed the patient to be in shock, with the blood pressure 80 systolic, 50 diastolic, and the pulse rate 88. The mucous membranes were quite pale. General examination was otherwise negative. Abdominal examination showed a gravid uterus reaching to the level of the xiphoid cartilage. The uterus was quite tender on the left side. There were definite intermittent uterine contractions, but the uterus was well relaxed between contractions. No fetal heart tones were heard.

Initial laboratory examinations showed the red blood count to be 2,000,000 and the hemoglobin 8.5 Gm. The blood was type B Rh positive. The clotting time was 9 minutes and the clot appeared firm, with good retraction.

The patient was given morphine, and blood was started as soon as it could be cross-matched. After the patient had received 500 cc. of blood, the pressure was stabilized at 100 systolic, 60 diastolic. At

8 a.m. an aseptic examination was carried out, and the cervix was found to be long and firm but would admit the index finger. No placental tissue was felt. At this time the membranes were ruptured, and a copious quantity of amniotic fluid under pressure was released. Following this there was no excessive bleeding. Thereafter the uterus became ligneous to palpation and quite tender.

After incubation for one hour the clot had begun to fragment, and within 3 hours had completely dissolved. The patient's condition improved, however, and there was no evidence of further bleeding. She was given an additional 1,000 cc. of whole blood. Subsequent clotting times were 7 and 8 minutes, and the final clot before delivery did not dissolve.

At 6 p.m. on the day of admission the patient spontaneously delivered a 3 pound 5 ounce macerated stillborn infant. The placenta showed evidence of complete separation and a 500 cc. retroplacental clot was present. No excessive bleeding followed the delivery, and convalescence was smooth. The hemoglobin on the following day was 10 Gm.

Case 2

The patient was a 23 year old Negro woman, gravida 3 para 2, whose estimated date of confinement was February 27, 1955. She had been seen by her family physician on two occasions during the pregnancy and on each occasion the blood pressure had been about 150 systolic, 90 diastolic. She had not been seen during the month prior to admission. She went into labor at home around 4 a.m., February 18, 1955, and shortly thereafter began bleeding vaginally. About 7 a.m. she began to have excruciating pain in the abdomen and to bleed profusely. On being summoned, her family physician referred her to the hospital. She was admitted at 10 a.m. and had an immediate precipitate delivery of a 4 pound 4 ounce stillborn infant. The placenta showed evidence of complete separation and 700 cc. of blood clots followed. The blood pressure was 116 systolic, 60 diastolic, and the pulse rate was 92. The red blood cell count was 2,300,000, and the hemoglobin was 6.5 Gm. The clotting time was 11 minutes. The patient's blood was found to be type A Rh positive.

Administration of compatible blood was immediately started. Though the uterus seemed well contracted, the patient continued to bleed moderately. At 11:30 a.m. she went into profound shock, and blood pressure was not obtainable. Examination of the initial blood clot showed that it had begun to fragment at the end of an hour, but had not dissolved. Blood was begun in additional portals, and a vasopressure drug was administered. The blood pressure promptly rose to 100 systolic, 60 diastolic and there was no evidence of further bleeding. The patient was given a total of 2,000 cc. of blood. The blood pressure leveled off at around 140 systolic, 90 diastolic. The hemoglobin the following morning was 10.5 Gm. The initial blood clot completely dissolved in three hours. Subsequent blood specimens clotted normally, and the incubated clot was stable. The patient convalesced uneventfully thereafter.

These cases illustrate the possibility of reversing the trend towards afibrinogenemia by amniotomy and the replacement of blood loss. I feel that virtually all except the far advanced or neglected cases will respond to these measures. I further feel that the cases of severe abruptio placentae that cannot be managed to the patient's advantage by con-

servative means with vaginal delivery, is rare.

In view of the literature and our experience, four points should be emphasized.

1. Failure of the blood to coagulate in abruptio placentae is rare, but when it does occur it constitutes an obstetric complication of major proportion. Because of its gravity, all cases of premature separation of the placenta should be managed with this complication in mind.

2. By the use of the very simple clot observation test, a rough evaluation of the fibrinogen level can be obtained.

3. Any institution in which obstetrics is practiced should be prepared to meet the problem of afibrinogenemia by keeping an adequate supply of fibrinogen on hand.

4. The majority of cases of severe abruptio placentae will respond to conservative management, with the use of morphine, blood replacement and amniotomy.

Abstract of Discussion

Dr. James Donnelly (Winston-Salem): This is a fascinating complication, and one which has attracted considerable attention in the current literature. I will restrict myself to the most troublesome points.

Concerning the etiology, it should be made clear that two problems are involved. One is that of defibrogenation, in which the amniotic fluid or placental tissue enters the blood stream and causes defibrination. In the problem of septic abortion, the primary deficiency is in the liver. These patients do not form fibrinogen. Liver disease rather than defibrinogenation is the problem.

The Lee-White clotting test is the key to the situation, at least in most hospitals in the state. It is a simple test, and can be performed anywhere with three test tubes 8 mm. in diameter. One cubic centimeter is placed in each test tube. The first tube is tilted at 15-second intervals until the blood becomes solid. The second tube is tilted and the time required for solidification is known as the clotting time. If a larger tube is used, somewhat more time will be required. The third tube is the key. Watch for clotting behavior, which as far as I can gather from the literature, is the crux of the whole matter.

I have tried to establish the relationships between clot behavior and fibrinogen levels as found in the varying phases or degrees of afibrinogenemia. In the first group of cases fibrinogen levels fall within normal limits. Reaction occurs within one to 24 hours, and there is no dissolution. In the second group, representing what some would call the subclinical phase, levels range from 150 to 220 mg. per 100 cc. Clotting time may be delayed, and some dissolution may occur within 24 hours. In the third group, manifesting obstetric shock levels range from 100 to 150 mg. per 100 cc. Clotting time is usually delayed and partial dissolution occurs in from one to three hours. The fourth group represents a more severe form of shock, with fibrinogen levels of 60 to 100 mg. per cc. In these cases the clot is soft, fragile, and abnormal from the first, with early dissolution. Not many patients

are found in the fifth group, in which levels range from zero to 60. In this group, there is no clotting whatsoever.

With regard to treatment, two comments can be made. The first regards bleeding in the last trimester of pregnancy. All patients with bleeding in this state should be admitted to the hospital immediately, even though the bleeding is minimal. It is essential to cross-match 2,500 cc. of blood. In a series of 50 cases reported recently, that was average amount used in treatment.

With regard to fibrinogen, series in which transfusion alone proved adequate treatment have been reported. Although I have had no experience with it, I gather from others that fibrinogen is a helpful agent. Transfusion of blood is necessary, however.

I would emphasize rupture of the membrane, though I don't think that cesarean section is done necessarily for the survival of the baby. In one series of cases there were 62 pregnancies with 46 stillbirths, including a fair number of cesarean sections. In these cases I would guess that the sections were done for the benefit of the mother.

There is probably a valid reason for resorting to cesarean sections for some of these mothers who do not respond to rupture of the membrane and replacement of blood and fibrinogen. I would like to emphasize, however, that if a section is planned, it is essential to have the clotting mechanism as near normal as possible.

Many writers speak of infusing fibrinogen during the operation. A Boston group refrained from 8 to 12 hours when their hand was not forced. In an emergency, they infused fibrinogen during the operation, which I think makes good sense.

The problem of postpartum hemorrhage should also be emphasized. These patients bear watching. The fact that they have survived the delivery doesn't necessarily mean that they are safe. They should be watched not only for immediate postpartum bleeding but for delayed hemorrhage, which may occur hours later.

Dr. Hunter Jones (Charlotte): I cannot let go unchallenged some of the statements that have been made today. Dr. Brantley's fetal loss, if I understand correctly, was 100 per cent. As I reported about two years ago, out of 10,000 deliveries at Charlotte Memorial Hospital, the fetal loss from sections in cases of accidental hemorrhage was somewhere between 30 and 35 per cent. I can't recall the over-all fetal loss, vaginal and sectional, but it was a far cry from 100 per cent.

In our hospital, if a patient comes in with premature separation of the placenta and the baby is not only viable but in good condition, we don't wait to see if the mother can be delivered vaginally. We—at least some of us—do a cesarean section. Over the country there are two schools of thought on the subject; the conservatives do only vaginal deliveries. In our hospital the section rate is 4 per cent. At times it has been as high as 5.2 per cent, and in the case of individual physicians 6 or 7 per cent. I am sure that the fetal salvage is considerably better than that cited by Dr. Brantley.

I would disagree that we perform cesarean sections only for the benefit of the mother. Certainly that is the primary reason. In some of the cases, even with stillbirths, the mother's ultimate outcome depends on the procedure followed. As Dr. Donnelly said, with the administration of blood and fibrinogen section may be the best solution, but I would disagree that the fetus is discounted in the decision. I think we can all agree upon that.

Where we disagree is in regard to the patient who comes in bleeding. As far as we know, she hasn't reached the stage of afibrinogenemia. We type

and cross-match the blood and rupture the membrane. The cervix will admit one finger. The patient is not in active labor. A decision has to be made now. Shall we perform a section or await vaginal delivery. In the past I have not hesitated at that stage of the game to decide on a section, even in the absence of fetal distress. I want to stress that point. If you wait until the baby is damaged, why perform a section? Do you know that, obstetrically speaking, the greatest cause of spastic children at Johns Hopkins Hospital, insofar as an honest decision could be reached, was found to be bleeding from premature separation of the normally implanted placenta?

This is not the horse and buggy days of obstetrics. We are behind the times if we think we have done all that is necessary when we save the mother.

Certainly in premature separation of the normally implanted placenta we have been satisfied too often, in my opinion, with saving the mother. We haven't had a maternal death in the Charlotte Memorial Hospital from bleeding since the hospital was opened.

I cannot agree with the theory of conservative management 100 per cent. In this day of modern obstetrics, it is possible to salvage both the mother and baby undamaged. We don't want a spastic child.

Dr. Hampton Mauzy (Winston-Salem): I disagree with Dr. Jones on one or two points. How does he differentiate between marginal rupture of the sinus and abruptio placenta? In my opinion marginal sinus rupture is sometimes wrongly diagnosed as abruptio placenta. Furthermore, I want to know if he performs a section on every woman who comes in bleeding during the last trimester of pregnancy. Personally, I don't believe that it is necessary. And I believe that few, if any babies are ever saved in true abruptio placenta. If I do a section in such a case, and the baby is delivered alive and well, the outcome is due to God and not to anything I did.

I might add this: We carefully observe the woman who is bleeding in the third trimester of pregnancy. We are trying to give the baby the best possible chance of living. I don't believe any babies are saved in these cases by cesarean sections.

Dr. Jesse Caldwell (Gastonia): I will leave the controversy a moment to comment on the problem of hemorrhage at the time of labor and pregnancy due to hypofibrinogenemia. In the past six months I have known of several hemorrhagic complications at delivery or immediately afterward. If the attending physician had not had an inkling of the role fibrinogen plays in such cases, disaster would have resulted, as it did in one case.

The causes of afibrinogenemia have been listed in every specialty journal during the past several years. From experience with 2 cases, I would like to add one other to the list—infection, or septicemia. Two patients with ruptured appendix in pregnancy, one in the middle trimester and one in the last, showed definite afibrinogenemia. Both had gastrointestinal hemorrhage, and one case resulted in death. The other patient was saved by early recognition of the condition when she vomited blood before leaving the delivery table after giving birth to a stillborn infant three weeks following an operation for ruptured appendix.

The new fibrinogen test may not be entirely reliable unless the technician has had a great deal of experience. In order to get the fibrinogen from the Red Cross, it is necessary to show that definite afibrinogenemia is present. It may be that 3 or 4 Gm. are not necessary. One gram has brought spectacular results in my experience. Since the test

may not be entirely reliable, it may be wise to administer fibrinogen in any case of postpartum hemorrhage.

Dr. L. C. Ogburn (Winston-Salem): I hesitate to enter the cesarean section controversy. I doubt if the contenders on either side are as in extreme in practice as they sound. By maintaining a flexible position about half-way between the two extremes, I believe we can hope to save a good number of the babies and almost all the mothers.

Dr. Jones: To answer Dr. Mauzy's questions: Obviously, if we did sections on all patients who bleed during the last trimester of pregnancy, our section rate would be greater than it was last year—3.2 per cent. As to how to differentiate between the rupture of a marginal sinus and abruptio placentae, many practitioners are in doubt. The best reference I can give is Drs. Graham, Bartholomew and Fish at Emory.

I don't agree that the patient in the last trimester of pregnancy should not be examined. If the patient bleeds on careful examination with a speculum, she was bleeding already.

Marginal sinus rupture, as I understand it, is a condition that frequently occurs when the blood loss is only moderate. At Emory they accept that fact and let the patients go home if the bleeding stops. They may return as many as two or three times. The bleeding may increase with each recurrence, or it may not. That isn't true with accidental hemorrhage. A real hemorrhage doesn't stop by itself.

Accidental hemorrhage produces certain signs and symptoms, beginning with localized tenderness which the patient hasn't had before. It is important to make an examination with a speculum as well as a digital examination.

Dr. Brantley (closing): In answer to Dr. Jones, I would say that he has failed to differentiate between the mild and severe form of abruptio placentae. Severe abruptio is, by definition, one in which the infant is dead. It is obvious that there can be no fetal salvage in this group. We frequently section patients with mild abruptio placentae, and our fetal salvage in that group is good.

It is well known that hookworm disease, malaria, and tuberculosis are intimately related to malnutrition in many persons who suffer from these diseases, but whether or not the relationship is causal defies affirmation except in certain individual situations. The sufferer of malaria or hookworm disease may be malnourished because of anemia that reduces his productive and earning capacity and therefore his ability to provide for his food needs. Or the malnourished person, as a result of diminished resistance, may fall an easy victim to such diseases. Whatever may be the relationship, it is clear that the well-being of the individual is compromised by malnutrition as well as by certain specific diseases.—Institute of Inter-American Affairs, Pub. Health Reports, Nov., 1953.

* * *

Although much progress has been made, multiple screening is still in an evolutionary stage. Screening and follow-up programs for syphilis and tuberculosis have been highly developed, but this is not true of screening for other diseases or for groups of diseases. Much remains to be learned through evaluation of multiple screening, in terms of accomplishments and costs of procedures to be followed at various stages from the original screening through the entire follow-up.—Arnold B. Kurlander, M.D., and Benjamin E. Carroll, M.A., Pub. Health Reports, Nov., 1953.

REPORT OF AN EIGHT-YEAR CURE OF CARCINOMA OF THE BREAST COMPLICATING PREGNANCY

JAMES F. MARSHALL, M.D., F.A.C.S.

WINSTON-SALEM

Reported five-year cures of carcinoma of the breast complicating pregnancy are relatively infrequent. In general there is a feeling that few, if any, patients survive the five-year period, particularly when the axillary nodes are involved. Haagensen and Stout⁽¹⁾, in a paper in 1943, stated that the co-existence of cancer of the breast and pregnancy or lactation was a contraindication to radical surgery. In a later article, Haagensen⁽²⁾ modified this position and said he would consider operation in less advanced cases of this type.

Harrington⁽³⁾ has reported one of the larger series of cases in which cancer of the breast was associated with pregnancy or lactation. There were 92 patients in his series, 11 of whom were pregnant at the time of operation. Sixty-three per cent of these patients had axillary metastases at the time of operation, as compared with 63.8 per cent of those not associated with pregnancy, while 90 per cent of those lactating at operation had axillary metastases. In those without axillary metastases, the five-year cure rate was 75 per cent, as contrasted to zero in the group with axillary metastases who were pregnant at operation.

Geschickter⁽⁴⁾ stated that of 15 patients operated upon for carcinoma of the breast during pregnancy, none survived the five-year period.

In a recent article, Adair⁽⁵⁾ reported a large series of patients, of whom 48 were pregnant at the time of the operation. The five-year survival rate in these patients was 57 per cent. Of those who were aborted, 69.6 per cent survived five years, whereas of those not aborted, 44 per cent survived the five-year period. The results were even more striking in the group of 24 patients with involvement of axillary nodes. Twelve patients in this group were aborted, and 66.6 per cent survived five years, whereas of 12 patients not aborted, only 25 per cent survived the five-year period. These results, obtained by an aggressive approach to the problem, are unusually good and should en-

courage those surgeons who deal with this condition.

There is a generally accepted method for handling carcinoma of the breast. Opinion regarding those cases associated with pregnancy, however, appears to be divided—some advocating radiation but not operation, others radical mastectomy followed by radiation in cases involving axillary nodes. Adair⁽⁵⁾ recommended radical mastectomy followed by radiation in those cases with involved nodes, and, in addition, castration and abortion in patients not near term. Many feel, after the teaching of Beatson⁽⁶⁾, that a small percentage will be benefited by castration. The eight-year cure of the patient reported in the following case followed this latter method.

Case Report

The patient was a Negro woman, aged 44, para 6, gravida 7, whom I examined on November 14, 1946. She had first noted a mass in her right breast in July, 1946. The mass had gradually increased in size. Her last menstrual period was August, 1946.

Physical examination revealed a healthy-looking 44 year old woman. The inner lower quadrant of the right breast was the site of a 2½ cm., hard, nontender mass attached to the overlying skin and slightly fixed to the underlying fascia. One hard node was palpable in the axilla. The left breast was normal.

The abdomen presented a mass in the suprapubic region palpable almost to the umbilicus. Pelvic examination revealed a uterus which was irregular, soft, and commensurate in size with about a 4 months' pregnancy.

Radical mastectomy was performed on November 22, 1946, after a frozen section confirmed the clinical diagnosis of carcinoma of the breast. Pathologic report was scirrhous carcinoma with metastases to the regional nodes.

Since interruption of the pregnancy and castration was desired because of the positive axillary nodes, supracervical hysterectomy and bilateral salpingo-oophorectomy were performed on December 3, 1946. The uterus contained a 3½ to 4 month fetus and several fibroids. The patient made an uneventful recovery, and was discharged from the hospital 10 days following laparotomy.

Between January 6, 1947, and February 12, 1947, the patient received x-ray therapy over the operative site, axilla, anterior mediastinum, and supra- and infra-clavicular areas on the right—1,600 r to the anterior axilla, 1,600 r direct to the axilla, 2,000 r to the anterior mediastinum, and 2,000 r to the supra- and infra-clavicular areas, right.

This patient has been followed at six-month intervals since 1947. When last seen by me in August, 1954, she had a pleural effusion. This finding was thought to be due to tuberculosis, for which she has been confined to the Western North Carolina Sanatorium since August. A letter from the medical director in January, 1955, stated that the pleural effusion had disappeared, and that although it has not been possible to prove that she has tuberculosis, that is their diagnosis, and he can find no evidence of cancer in the lungs or elsewhere.

Summary

An eight-year cure of a patient with carcinoma of the breast and metastases to the axillary nodes associated with pregnancy has been reported. Treatment was by radical mastectomy, bilateral oophorectomy, and interruption of pregnancy (supra-cervical hysterectomy), followed by x-ray therapy.

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Study Finds Aspirin As Effective As Hormones In Treating Rheumatic Fever

Aspirin is apparently as effective as the hormone drugs ACTH and cortisone in treating acute rheumatic fever in children under the age of 16, according to results of a long-term, cooperative clinical study sponsored by the Council on Rheumatic Fever and Congenital Heart Disease of the American Heart Association and the Medical Research Council of Great Britain.

The continuing study, begun in 1951, further disclosed that aspirin was more successful than either of the hormones in suppressing symptoms of the disease over a six to nine-week observation period. At the end of one year, the proportion with residual cardiac damage was similar in the three treatment groups. The report is published in *Circulation* (March 1955).

EYE INJURIES FROM CHRISTMAS TOYS

DAN CURRIE, M.D.

FAYETTEVILLE

During the Christmas holidays—that is, from the time schools close until they re-open—eye injuries in children always increase. These injuries not only occur in greater numbers during this holiday period than any other period of the year, but they are exceptionally severe.

Each year for four years four ophthalmologists in Cumberland County have made a combined effort during this critical period to study the problem and to put before the public the dangers connected with the improper use of certain toys, especially those involving missiles. Even miscellaneous eye accidents not associated with projectile toys increase during the Christmas vacation, perhaps because of the renewed vigor with which a child plays upon his release from the daily grind of school. Possibly, too, the preparation for the holiday festivities requires more of the parents' attention than they realize and the children receive less parental supervision in their play. One 10 year old child playing an improvised game of blind man's buff had his head wrapped in a sweater as the blindfold. Upon its being snatched off his face, a broken button made a linear laceration of the cornea through which there was an avulsion of the torn iris, the lens, and most of the vitreous. The child was not seen by a physician for three days, and by this time panophthalmitis had developed. The eye was enucleated.

Another little girl was struck in the eye with the corner of a wooden penny match box. She sustained a V shaped laceration of the cornea. Vitreous and lens were found in the lower fornix. The ciliary body had been lacerated at each arm of the V. The eye was blind and was enucleated.

These accidents were bizarre. They are described to call attention to the apparently innocuous articles and games that may bring tragic results, as was the case in this study. Most of the injuries had quite ordinary causes: the thrown rock, the fall into winter weed stubble, the broken piece of glass (usually a pane), fence wire.

To some degree these types of accidents could be prevented by the child himself,

since most children have been instructed not to play in areas where such objects may be found.

Types of Injuries

A breakdown of all types of eye injuries that were serious enough to require as much as two weeks treatment or observation by an ophthalmologist are listed below. These cover the injuries referred to ophthalmologists in a community of 70,000 people during the 1954 Christmas vacation period. The total number represents a decrease of 30 per cent from that of previous years.

Table 1
Classification of Injuries

Cause of Injury	No.
Air rifle	9
Bow and arrow	2
Spring rubber cup pistol	2
Miscellaneous	
Rock	2
Wire	1
Glass	3
Button of sweater	1
Stick (homemade sword)	1
Screwdriver (from mechanical toy)	1
Weed stubble	1
Matchbox	1
Total	24

Of this total number of 24 severe injuries in which some vision was lost, 7 eyes were enucleated. Injuries not requiring lengthy treatment or resulting in some loss of vision are not included in this report.

Injuries resulting from any missile-throwing toy, from a sling-shot to an air rifle, proved to be most serious. These ranged from traumatic iritis to complete destruction of the globe. The arrow with a metal tip is responsible for the most destructive injury, but arrows with rubber vacuum cups have caused traumatic iritis, and in one case retinal detachment. There is on most toy counters a plastic pistol that has as its projectile a 6-inch stick with a rubber cup. This gun is a favorite of smaller children, and is particularly treacherous because it is considered to be an indoor toy. Two severe injuries resulted from these pistols in the 1954 study. The B B gun, or air rifle, damaged many eyes, but resulted in only one enucleation.

None of these toy weapons is a respecter of persons. The ages of the children treated ranged from 9 months to 15 years. The 9 month old child was sitting in his mother's lap inside the house when an air rifle pellet

entered through the window and struck the baby's eye. This eye was enucleated.

Many of the air rifle injuries resulted from ricochets. In one instance a bullet ricocheted from the wooden target, only 8 feet away, to the sighting eye of the boy firing the gun. Others ricocheted into the eyes of bystanders some distance away. Actual air rifle battles, or cowboy and Indian games resulted in no serious eye injuries, although pellets were removed from the skin of the forehead and lids of the victims.

Conclusion

This paper is not an attempt to bar the sale of any of the toys mentioned, but to find some practical means of educating the public as to their dangers and as to how they might be used with greater safety. The community from which this report comes is in no wise different from others, since the same toys are available everywhere and children's games and use of the toys are essentially the same. To recite the statistics to the populace in general or to individuals has a modicum of effectiveness; but constant and dramatic presentation of the facts with descriptions of how the accidents may occur has been, and will continue to be, more helpful.

Methods of giving this information to the public are numerous, and all have merit. Newspaper articles with pictures, spot radio reminders, and television shows are beneficial. A discussion at the November and December meetings of Parent-Teacher Associations probably reaches the most interested people. Arrangements with grammar school principals to have two or three

uniformed men (military men or policemen) come to the school and demonstrate the correct use of rifles, pistols, and bows and arrows impress the children. Explorer Scouts and Boy Scouts may also be used for this purpose, as many counties are planning to do this year.

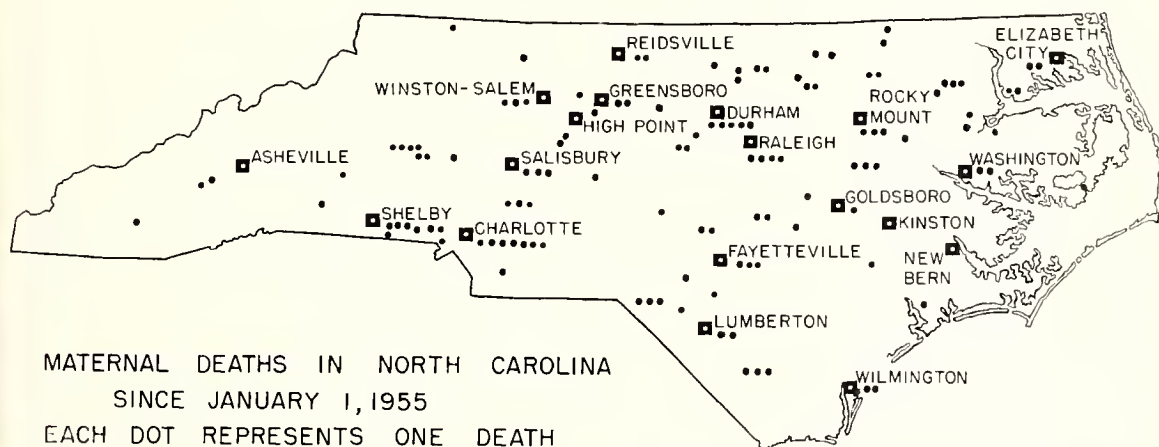
Minor details that may easily be left out of the instructions are important—for example, the preparation of a proper target from which it is impossible for the missile to ricochet. The target should be backed by a bag filled with cotton, sand, or straw. Two injuries in the 1954 report were the result of ricochets from paper targets tacked on boards.

All medical men must share the responsibility of helping Santa Claus complete his mission without leaving a series of tragedies in his wake. The best approach is to instruct children in the use of dangerous toys before Santa Claus comes.

Help Fight TB



Buy Christmas Seals



North Carolina Medical Journal

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under the direction of its Editorial Board.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Principles
of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

NOVEMBER, 1955

UNITED MEDICAL RESEARCH FOUNDATION

The United Medical Research Founda-
tion of North Carolina, Inc., was organized
in March, 1955, by a group of leading citi-
zens from some 25 North Carolina United
Fund Committees who were vitally con-
cerned with the problem of providing the
funds for medical research on a sound and
sensible basis.

The purpose of the Foundation as stated
in its constitution is "to provide medical re-
search funds for polio, tuberculosis, heart
diseases, cancer, diseases which cripple chil-
dren and adults, and other diseases."

Elected as first president of the Founda-
tion is a prominent Durham physician and

member of the staff of Duke Hospital, Dr.
James H. Semans.

An integral part of the Foundation's struc-
ture is its Research Advisory Committee.
This committee is composed of the deans of
the three medical schools in North Caro-
lina—Dr. W. Reece Berryhill, School of Med-
icine, University of North Carolina, Chapel
Hill; Dr. C. C. Carpenter, Bowman Gray
School of Medicine, Winston-Salem; and
Dr. W. C. Davison, Duke University Medi-
cal School, Durham. It is the responsibility
of the Research Advisory Committee to re-
view and investigate all requests for re-
search funds and the proposed research pro-
jects.

The Foundation is governed by a Board
of Directors consisting of two representa-
tives appointed by contributing community
organizations plus members at large ap-
pointed by the Board. An executive commit-
tee consisting of the officers plus six other
members of the Board supervise the trans-
action of the business of the Foundation and
act for the Board in carrying out the pur-
poses of the organization between Board
meetings.

Serving with Dr. Semans are: Vice Presi-
dents James M. Alexander, Charlotte; Judge
Norman Gold, Rocky Mount; and Reid
Holms, Winston-Salem; secretary, Mrs. T.
R. McLean, Fayetteville; treasurer, Paul
Wright, Jr., Durham; and Dr. Eben Alex-
ander, Jr., Winston-Salem; John F. Mc-
Nair III, Laurinburg; Thomas A. Hood,
Fayetteville; John L. Stewart, Charlotte;
and M. L. Street, Rocky Mount.

In a statement issued recently, Dr. Semans
made the following statement regarding the
program of the Foundation:

Research into the causes and cures of the
many crippling diseases which plague mankind
must be furthered by all means at our com-
mand. Funds must be made available to our
established institutions here in North Carolina
to promote research. We can well be proud of
the tremendous facilities available for the ad-
vancement of the cause of research in all fields.
This is a pioneer effort and one which is being
watched by the entire country as the best way
yet devised for citizens of the communities of
a state to provide necessary funds for medical
research directly to its own established and dis-
tinguished medical centers.

Approximately \$20,000 has already been
made available to the Foundation from var-
ious United Fund communities. Several pro-
jects have already been recommended by the

Research Advisory Committee and approved by the Board of the Foundation.

The types of projects for which the fund will be used have been clearly defined by our Research Advisory Committee.

Primary consideration will be given to requests for the support of research projects based on new clues concerning tuberculosis, poliomyelitis, cancer, diseases of the heart, and diseases which cripple children and adults. Next year funds will be available for research on any diseases.

Research projects designed to investigate new clues in medicine are called "pilot studies." The cost of this type of research is usually comparatively small. The larger research foundations are not likely to support such projects, since it is necessary for them to go to considerable expense to investigate the worth of each one. Such an investigation is not necessary for our Foundation, which makes grants only to research workers who can be personally known to the members of our Research Advisory Committee, and responsible to them.

Once a pilot study has been completed and the results have been published in a recognized medical journal, it is often possible for the research worker to procure much larger grants from other sources in order to continue the investigation on a bigger scale. Even if the pilot project should not lead to any promising results, the money invested has served to train one or more young medical scientists in methods of research. These men form the ranks from which our great medical scientists of the future must be developed.

Another type of request which will receive serious consideration from our Research Advisory Committee is for money to continue an important research project for which other funds have been temporarily exhausted. Without stop-gap aid from the United Medical Research Foundation, it would often be impossible to keep highly trained personnel, with rare skills and techniques, long enough to complete the project. When funds have been exhausted, these individuals, with their highly prized talents, must depart, if they are to subsist. With the help of short-term support, extremely important research can be continued until renewal of a grant from one of the larger

foundations (which operate on a rigidly limited annual basis) can be obtained. Once again, our Foundation has the advantage of working through the deans of the three medical schools in North Carolina, who have first-hand knowledge concerning each project for which temporary support is requested. The larger foundations, on the other hand, must carry out a complete investigation before renewing their support of a project. It is believed that, by this very practical means, our Foundation can provide an indispensable link in the chain of advancing medical knowledge.

Because of its up-to-date information concerning research grants, our Research Advisory Committee will be able to render another valuable service—that of advising applicants where they may turn for backing, if their requests do not fall within the scope of the United Medical Research Foundation of North Carolina. This service, given without cost to anybody who applies for funds, will materially advance the reputation of our state in medical research, and should also create a better relationship with applicants who have to be turned down. We want all United Fund contributors to know of this service, so that they will be able to encourage any worthy person engaged in medical research to let the Foundation know of his needs.

* * *

DR. REECE BERRYHILL HONORED

Dr. William S. Middleton, Chief Medical Director of the Veterans Administration, has recently announced the appointment of an Advisory Committee on Research, composed of four members. One of these four members is Dr. W. Reece Berryhill, dean of the University School of Medicine. The other three are Dr. J. Burns Amberson, consultant to the Chest Service of Bellevue Hospital in New York City; Dr. Carol A. Moyer, professor of surgery at the Washington University School of Medicine in St. Louis; and Dr. Harold G. Wolff, associate professor of psychiatry at Cornell University Medical College in New York City.

On behalf of the doctors of North Carolina the NORTH CAROLINA MEDICAL JOURNAL extends hearty congratulations to Dr. Berryhill for this well deserved recognition.

EYE INJURIES FROM CHRISTMAS TOYS

In this issue a very timely article by Dr. Dan Currie of Fayetteville calls attention to the marked increase in eye injuries during the Christmas holidays. The hazards of fire-crackers have long been recognized by nearly all except those who manufacture and sell such products. Dr. Currie, however, has rendered an excellent service in reminding our readers that damage may also be done by relatively harmless toys. Not only ophthalmologists but all doctors would do well to read the article and then warn the parents of young children of the tragedies that may follow the annual visit of Santa Claus.

One practical way in which doctors all over the state can help spread this information is to interest their local newspaper men in publishing an abstract of Dr. Currie's article.

* * *

NEEDED: A CLEAR FOCUS ON TUBERCULOSIS

The Christmas Seal Sale provides an opportunity to focus public attention on tuberculosis, the tuberculosis association, and those things needed to protect citizens against the disease.

In the years since 1905, when our North Carolina Tuberculosis Association was founded, the death rate from this disease has been cut by more than 90 per cent.

With this drop in the death rate has emerged a changing picture in the field of tuberculosis control. The development of new and better techniques of treatment, the use of new and better drugs, and better living conditions have enabled many to stay alive who, only a few years ago, would have died of tuberculosis. Today, the emphasis is being placed on the *problem of the living*, for the fact is that *new cases of tuberculosis continue* to be reported in only slightly decreasing numbers.

Finding the people who have tuberculosis, treating them, helping them through the sometimes arduous periods of treatment, helping them to reassume their rightful place in the community, and seeing to it that continuing medical supervision is avail-

able to them, are the problems which we face today.

Solution of these problems calls for the enlistment of the interest and support of welfare and citizen groups, as well as the medical and public health professions. Such support must be based upon sound education. Education is the chief purpose of the Christmas Seal.

* * *

DR. FREDERICK R. TAYLOR

For a number of years before the final summons came on November 1, Dr. Frederick R. Taylor of High Point had been living under the shadow of Death. With commendable courage, however, he kept on with his practice and with his teaching at Bowman Gray until the week before the end.

Fred Taylor was one of North Carolina's best known and most highly respected physicians. He was almost certainly the most widely read physician in the state. He was a frequent contributor to medical literature. The late Dr. Henry A. Christian, editor of the Oxford Loose Leaf System of Medicine, selected him to write and keep up to date the Section on Rare and Unusual Diseases.

His wide reading made him a logical choice as professor of medical literature at Bowman Gray School of Medicine. And it was also natural for the students of Bowman Gray, when this spring they formed an organization to further interest in the history of medicine, to name it "The Frederick R. Taylor History of Medicine Society"—"in recognition of the long-time interest of Dr. Taylor in the subject and in its worth to the student of medicine."*

Dr. Taylor was one of the most faithful members of our State Society. He was also a member of the American Medical Association, the Southern Medical Association, the American Association for the Advancement of Science, and a Fellow of the American College of Physicians.

Fred Taylor was a real scholar and a cultured gentleman, who taught and practiced the art as well as the science of medicine.

He is survived by his widow and four children.

*From the constitution of the Society.

PRESIDENT'S MESSAGE

The Physician-Patient Relationship

Today, more than ever, there is an urgent need for external vigilance to guard our patient-physician and physician-physician relationship. This is more of a reminder than revelation to most of you.

It is generally recognized, but too often ignored, that the physician-patient relationship is the fundamental principle of good medicine, medical ethics, and medical law. This relationship did not just happen any more than our country, community, and state just happens to be a good place in which to work and live. It was won and given to us through the sweat and tears of our forefathers. Our American system of freedom, our patient-physician relationship, the art of medicine, and public relations are so interdependent that neither can long exist without the other. They cannot be won by surveys or bought with dollars.

There is a general feeling among doctors that the physician-patient relationship is made up of the feeling of good will, high regard, respect, cooperation, and confidence we find so necessary to the successful treatment of our patients. We value it highly, and rightly so.

The physician-patient relationship, however, is no such nebulous affair. It is an affirmed and legally binding mutual agreement, made especially between the physician and his patient. It is enforceable in the courts to the last detail. It is embodied in the common law, and is the result of hundreds of years experience in settling disputes between physicians and their patients. Failure of the doctor to live up to his bargain is a breach of trust. It has been solemnly resolved that malpractice is a great misdemeanor and offense at common law, whatever the circumstances leading to it, because it breaks the trust which the patient has placed in his physician, and tends to the patient's destruction.

A physician-patient relationship requires freedom for both the doctor and the patient. The requisite freedoms have longed been recognized as "free choice of physician" and freedom from third party intervention.

A third freedom is equally important, but

is generally overlooked or taken for granted. This is scientific freedom, which as of now is being rapidly destroyed by third party intervention between the patient and his physician. Some of these third parties are the government, the labor unions, business corporations, and unfortunately some of our hospitals, insurance companies, segments of the nurses' association, health agencies, the United States Public Health Service, a few medical schools, and finally but not least, cultists—faith and fringe health healers.

Because the necessary freedoms offer a wide scope of exploitation and abuse, a strict conscience is just as an important attribute of a physician as are his skills and knowledge. That is why evidence of high moral character is a requisite for license, and why a license may be revoked for moral turpitude and unethical conduct. When you joined the society you were adjudged to be competent, of high moral character, and willing to live by the high standard of the company you keep. There is no room in the society for those who do otherwise.

A corporation, by whatever name, cannot morally or legally practice medicine or any other profession. By its nature, it is incapable of possessing the requisite knowledge of the science and the art of a profession. By its nature, it has no conscience.

Democracy recognizes no public need more compelling than the need for each individual to have complete freedom in purely personal matters. Among the most fundamental personal rights, without which man could not live in society, is the right to personal security, including the preservation of one's health, from such practices as may prejudice or annoy it.

Our patient-physician relationship encompasses the basic concept and fundamental principles upon which the art of medicine is founded. It also embodies our public relations, physician-physician relationship, and our medico-legal responsibilities. With proper physician-patient relationship, most of our major problems will cease to exist.

The third party agencies previously mentioned are perennial "do-gooders," and I am sure that many of them, except those mentioned in the last category, are motivated

by noble purposes. They are, however, misguided and uninformed as to what is best for the higher welfare of the community. Illness is a personal and real thing, the treatment of which must not be undertaken by any third party. Only a duly licensed physician can render this highly personalized service.

The federal government and other agents mentioned haven't changed their objective. Their aim is the control of medicine. Their occasional grin or smile, instead of the usual snarl, is a mask to seduce us. A man or a tiger who steps back from the fence he wants to jump in order to get a better start is not abandoning his objective. He is merely improving his chance of achieving his goal. Our enemies have used these tactics, but have not changed their objective of conquest of the medical profession. They can only be stopped by united action.

It is time for them to learn that they can shear a lamb once a year, but can skin him only once. Their motto is to pull as many feathers from the goose as they can without causing too much squawking. They have gone too far, and it is now time for us to squawk.

Confidence in the moral stamina of the medical profession has been shakened, because we have permitted a gradual piecemeal absorption of some of our rights and freedoms and have compromised our physician-patient relationship. Interventionists hope to persuade us now to go just a little bit further on the road to appeasement. Their objective is to lull us into the sleep of death. They hope to find us in a mood to face and battle the ugly facts of life, and to put off the evil day. As Louis XVI said, "And after this the deluge."

We must not let this age of specialization, marked scientific advancement, and the growing need for numerous consultations and technological assistance, disrupt our patient-physician relationship. The interjection of any third party between the patient and physician is immoral and dishonest.

In closing this message I am reminded of the short lines of a poet whose name I do not remember. It is a prayer for these days in which we are living.

God give me sympathy and sense, help keep
my courage high.

God give me calm and confidence, and please
a twinkle in my eye.

JAMES P. ROUSSEAU, M.D.

Committees and Organizations

NORTH CAROLINA STATE BOARD OF HEALTH

Dr. J. W. R. Norton, State Health Officer, announced on October 12 that the State Board of Health is authorized to request no longer that physicians submit individual reports to county health officers of children vaccinated through the use of poliomyelitis vaccine purchased through commercial drug channels. These reports were originally required to facilitate tracing the source and lot number of vaccine used in the event poliomyelitis should occur in any individual immediately following vaccination. Recently adopted changes in the testing of vaccine for safety by the Biological Laboratories of the National Institutes of Health have, it is believed, eliminated the necessity of submitting reports of each child vaccinated to county health officers. Dr. Norton stated, however, that every physician should keep in his office a careful record of the manufacturer and lot number of vaccine used in vaccinating each child.

It is the policy of the State Board of Health to include in all news releases a recommendation to the public that vaccination against poliomyelitis be obtained from private physicians. If there is insufficient vaccine available through commercial drug channels to meet demands for vaccination by private physicians, the State Board of Health will attempt to learn where vaccine may be purchased from drug houses having a surplus on hand and advise communities having a shortage where it may be obtained.

Although funds are available for purchasing more than 30 per cent of all vaccine available to this state during the shortage period, the state will continue to release 70 per cent for purchase through commercial channels until such time as demands for vaccine from physicians can be met. It is believed that under this plan a more equitable distribution of vaccine over the state can be maintained. When commercial drug channels have been adequately supplied, the State Board of Health will increase its purchase of vaccine above 30 per cent for distribution to and free administration of the vaccine by local health agencies. This will be necessary in order that as many children as possible be given an opportunity for vaccination as

far in advance of the 1956 poliomyelitis season as is possible. Funds now available for the purchase of vaccine for free administration by county health departments will not be available after February 15, 1956, unless the Congress should extend the expiration date of the present appropriation act or make available funds under a subsequent appropriation.

BULLETIN BOARD

COMING MEETINGS

Gaston Memorial Hospital Medical Symposium—Masonic Temple, Gastonia, November 30.

Fifth District Medical Society Meeting—Pine Needles Country Club, Southern Pines, December 1.

University of Florida, Tenth Annual Midwinter Seminar on Ophthalmology and Otolaryngology—Sans Souci Hotel, Miami Beach, January 16-21.

American Medical Association, Eighth Annual Medical Public Relations Conference—Hotel Statler, Boston, November 28.

American Medical Association, Ninth Annual Clinical Meeting—Boston, November 29–December 2.

Animal Care Panel (experimental animals) sponsored by New York University—Bellevue Medical Center—Henry Hudson Hotel (533 West 57th Street) New York City, December 1, 2.

American Medical Association, Committee on Toxicology and Committee on Pesticides, Symposium on Health Hazards of Chemicals—Atlanta, Georgia, December 29.

NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

Dr. Emery C. Miller, instructor in internal medicine, has assumed his duties as director of the outpatient department of the North Carolina Baptist Hospital. Dr. Miller replaces Dr. Charles E. Richards, who has returned to his home state of Nebraska as associate professor of internal medicine in the school of medicine of the University of Nebraska. Dr. Miller is a native of Mebane, North Carolina, and served his internship in the North Carolina Baptist Hospital in 1949-50 following his graduation from Johns Hopkins University Medical School. He entered the military service after his internship, serving in Korea from 1950 to 1952. He held appointments as fellow and resident in the Joslin Clinic in Boston, and returned to the North Carolina Baptist Hospital in 1953 as assistant resident in medicine. For the year 1954-55 he served as fellow in internal medicine in the Bowman Gray School of Medicine, and joined the permanent faculty on July 1.

* * *

On November 8, the Chi Theta Chapter of Phi Rho Sigma sponsored the first annual Herbert M. Vann Memorial Lectureship. Dr. Vann was professor of anatomy for more than a quarter of a century, and actively participated in the affairs of the fraternity as faculty advisor, both on the campus at Wake Forest and after the school of medicine

was expanded and moved to Winston-Salem. Dr. Joseph Eldridge Markee, professor and chairman of the Department of Anatomy at Duke University School of Medicine, was selected as the first lecturer in the annual series because of his many parallel interests with those of Dr. Vann. Dr. Markee has distinguished himself in his accomplishments in the field of research and teaching. He has contributed many articles to the medical literature and in recent years has achieved outstanding results in audio-visual aids, particularly in the teaching of anatomy.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

Dr. Ellis C. Berkowitz was appointed instructor in anatomy in the University of North Carolina School of Medicine on July 1. Dr. Berkowitz has held a position as Research Fellow at the University of California and is replacing Dr. Lionel Truscott who is now in military service. He received his A.B. in 1949, his M.A. in 1951, and his Ph.D. in 1954 from the University of California in Los Angeles.

* * *

Dr. Abraham Widra was appointed instructor in bacteriology on September 1, replacing Dr. Milton Huppert who resigned to accept a position in California. Prior to joining the University of North Carolina medical faculty Dr. Widra was research associate in the Department of Bacteriology, University of Pennsylvania. He received his M.S. in 1952 from University of Florida and his Ph.D. in 1954 from the University of Pennsylvania.

* * *

Dr. J. Norman Allen was appointed instructor in neurologic medicine on September 1. He has had medical training at Harvard Medical School, receiving his M.D. in 1949. Dr. Allen held the position as Teaching Fellow at Harvard Medical School in 1952-1953. He was Research Fellow with the Neurological Unit at Boston City Hospital in 1953-1954; and Research Fellow at McLean Hospital, Waverley, Massachusetts from 1954-1955.

* * *

A new program for training psychological interns at the North Carolina Memorial Hospital was inaugurated by the appointment of the first trainee, Miss Frances Menefee. Miss Menefee has been studying clinical psychology at the State University of Iowa, after receiving her bachelor's degree from Alabama College. She will spend a year in full time hospital work in the Department of Psychiatry getting further experience in working with a variety of patients and collaborating with the modern psychiatric team of psychiatrists, psychiatric social workers, psychiatric nurses, and occupational and recreational therapists. Trainees on this program will be drawn from applicants who are in good standing in graduate training programs in psychology departments around the country. Typically such trainees return to their own universities after the internship year to complete their work on the Ph.D. degree. This program is being supported by a United States Public Health Service training grant to the Department of Psychiatry.

* * *

Dr. Isaac M. Taylor, assistant professor of medicine, now on active duty as a lieutenant commander in the U. S. Naval Reserve Medical Corps, left Chapel Hill recently for Boston, where he will join the new U. S. Antarctic expedition, "Operation Deepfreeze," leaving shortly for a camp to be set up near the South Pole. He will be gone approximately 15 months.

Dr. Taylor has for several years made a study of frostbite. His research concerns the influence of low temperatures on tissue.

AMERICAN CANCER SOCIETY, NORTH CAROLINA DIVISION

Dr. John R. Kernodle of Burlington was moderator of a medical seminar on carcinoma of the cervix at the annual meeting of the American Cancer Society, North Carolina Division, held in Charlotte on October 23. Participants were Dr. Ruth M. Graham, director of the Vincent Cytology Laboratory, Boston; Dr. Bayard Carter, Duke Hospital, Durham; and Dr. Paul Kimmelstiel, Charlotte Memorial Hospital, Charlotte. As an additional feature of the program, Dr. Cornelius P. Rhoads, director of the Sloan-Kettering Institute for Cancer Research, discussed "The Relation of Increased Longevity to Neoplasia." Dr. Rhoads also spoke at the banquet meeting on "Progress in Cancer Research."

NORTH CAROLINA SURGICAL ASSOCIATION

The North Carolina Surgical Association held its annual fall meeting at Sea Island, Georgia, on September 23 and 24.

The program consisted of papers by Dr. William Hollister on "Surgery of the Lower Esophagus and Upper Stomach"; Dr. Woodhall Rose on "Carcinoma of the Stomach"; and a symposium on "Duodenal Ulcer" with Dr. Gordon Sinclair, Dr. Simmons Patterson, Dr. Frank Johnston, and Dr. John Hamrick participating. Dr. Eben Alexander discussed "Newer Concepts in Neurosurgery"; Dr. William Pitts, "Surgery for Intractable Pain"; and Dr. Louis Shaffner, "Surgery for Tracheo-Esophageal Fistulae."

Officers elected were Dr. Edward W. Phifer, Morganton, president; Dr. Alexander Webb, Raleigh, president-elect; Dr. Howard Starling, Winston-Salem, vice president; and Dr. Alfred Hamilton, Raleigh, secretary-treasurer.

NORTH CAROLINA TUBERCULOSIS ASSOCIATION

Governor Luther H. Hodges has designated this year as the fiftieth anniversary year of the North Carolina Tuberculosis Association.

In making the designation, Governor Hodges congratulated members of the NCTA and commended the thousands of volunteers who have participated in the fight against tuberculosis during the past 50 years.

* * *

A pilot study in tuberculosis testing will be conducted among preschool children who attend the 30 child health centers scattered throughout Mecklenburg County.

The study will be conducted by the Mecklenburg County Health Department with the Mecklenburg Tuberculosis and Health Association cooperating by purchasing the testing material and assisting in the hiring of additional part-time personnel to work with statistical follow-up.

The practice of tuberculin testing is becoming widely accepted as a source finding technique. This study is expected to shed a good deal of light on the incidence of tuberculous infection in the county.

An estimated 1,000 to 1,500 children will be involved in the study.

SIXTH DISTRICT MEDICAL SOCIETY

The meeting of the Sixth District Medical Society was held at the State Hospital, Butner, on October 5. One hundred and one members and guests were registered.

The president, Dr. C. T. Wilkinson of Wake Forest, presided. The afternoon program consisted of the following speakers and subjects: Dr. Charles B. Wilkerson, Raleigh, "Lupus Erythematosus," discussant, Dr. Joseph M. Hitch, Raleigh; Dr. LeRoy Allen, Raleigh — "Neurosurgical Procedures for Pain Relief"; Dr. Charles E. Flowers, Jr., University of North Carolina, "Evaluation of the Newer Therapeutic Agents in the Treatment of Toxemia"; Dr. John T. Sessions, Jr., University of North Carolina — "The Management of Severe Liver Disease"; Dr. Guy L. Odom, Duke University, "Nerve Lesions around the Wrist and Hand." During the brief intermission refreshments in the form of low sodium milk products and delicious cookies and biscuits were served through the courtesy of the Dietetics Department of the University of North Carolina.

At a business session which was held following a buffet supper, the following slate of new officers was approved: president—Dr. L. E. Fields, Chapel Hill; vice president—Dr. Lillard F. Hart, Apex; secretary-treasurer—Dr. Seth G. Hobart, Durham.

The president recognized several members and guests including Dean Reece Berryhill, University of North Carolina Medical School; Mrs. R. D. Croom, Maxton, president of the Medical Auxiliary of the State of North Carolina; Secretary and Mrs. James T. Barnes; Mr. William N. Hilliard, director of Public Relations for the State Medical Society; Mrs. C. T. Wilkinson, Wake Forest, Auxiliary counselor; Dr. George W. Paschal, Jr., Raleigh, counselor; and Dr. Rieves W. Taylor, Oxford, vice counselor. Dr. Paschal brought to the Society's attention recent unfortunate legislation lowering the disability age limit from 65 to 50. Dr. T. T. Jones, Durham, made an earnest appeal for increased support of the American Medical Educational Foundation. The scientific program was resumed by Dr. D. M. McNelis, superintendent of the State Hospital, Butner, who discussed "The Relationship between the State Hospital and the Practicing Physician," and concluded by Dr. O. Norris Smith, Greensboro, who presented "The Doctor's Insurance Program."

The members of the Medical Auxiliary, meeting in an adjoining room, heard an address by Robert Helms, Jr., of Wake Forest College, on "Mental Hygiene."

FORSYTH COUNTY MEDICAL SOCIETY

The monthly meeting of the Forsyth County Medical Society was held in Winston-Salem on November 8. The program consisted of a panel on public relations and medical ethics, led by Dr. Fred Garvey, chairman of the public relations committee.

EDGECOMBE-NASH MEDICAL SOCIETY

The Edgecombe-Nash Medical Society held its regular meeting in Rocky Mount, November 9.

Dr. R. D. Karnegay was in charge of the program and presented as speaker Dr. S. P. Perry, chief radiologist at Watts Hospital in Durham, who discussed certain phases of radioactive isotope therapy.

At the October meeting Dr. Susan Dees of Duke Hospital spoke on pediatric allergy.

UNIVERSITY OF FLORIDA SEMINAR IN OPHTHALMOLOGY AND OTOLARYNGOLOGY

The tenth annual University of Florida Midwinter Seminar in Ophthalmology and Otolaryngology will be held at the Sans Souci Hotel in Miami Beach the week of January 16, 1956. The lectures on ophthalmology will be presented on January 16, 17, and 18, and those on otolaryngology on January 19, 20, and 21. A midweek feature will be the Midwinter Convention of the Florida Society of Ophthalmology and Otolaryngology on Wednesday afternoon, January 18th, to which all registrants are invited. The registrants and their wives may also attend the informal banquet at 8 p.m. on Wednesday. The schedule has been changed to provide a maximum time for recreation each afternoon.

The seminar lecturers on Ophthalmology this year are: Dr. Francis H. Adler, Philadelphia; Dr. A. Gerard DeVoe, New York; Dr. Michael J. Hogan, San Francisco; Dr. C. Wilbur Rucker, Rochester, Minnesota; and Dr. A. D. Ruedmann, Detroit, Michigan. Those lecturing on Otolaryngology are: Dr. Frederick A. Figi, Rochester, Minnesota; Dr. Lewis F. Morrison, San Francisco; Dr. Charles E. Kinney, Cleveland; Dr. John R. Lindsay, Chicago; and Dr. Bernard J. McMahon, St. Louis.

NEWS NOTES FROM THE AMERICAN MEDICAL ASSOCIATION

Guarding the Worker's Health

Ways of keeping the American worker healthy and on-the-job will be considered by representatives of labor, management, government and the medical profession at the sixteenth annual Congress on Industrial Health Monday and Tuesday, January 23-24 at the Sheraton-Cadillac hotel, Detroit. Sponsored by the American Medical Association's Council on Industrial Health, the sessions on Monday will be devoted to "The Role of Medicine in Industrial Relations" and "Medicine's Responsibilities in the Automotive Age."

A special all-day program on Tuesday will be built around the subject, "Absence from Work Due to Non-Occupational Illness and Injury," with particular reference to integration between industrial and private physicians. This program—arranged by the A.M.A.'s Committee on Medical Care for Industrial Workers—will cover such aspects as the nature and extent of the problem, efforts of management, labor, and the community to reduce job absence, the role of various persons (for example the worker, personnel director, nurse, doctor) in this field, and a discussion of the Ontario System of recording absence data.

* * *

U.S. Medical Schools Need Your Dollars Now!

Hurry! Hurry! Hurry! There's still time left in 1955 to send in your dollars to the American Medical Education Foundation for our nation's 81 medical schools. The A.M.E.F.'s Annual Tax Mailing—now being distributed to all A.M.A. members—stresses the importance of an immediate contribution. Individual financial help is especially needed at this time. During the first nine months of 1955, total gifts amounted to \$540,343.33 (including an A.M.A. grant of \$100,000) as compared with \$996,198.75 during the same period in 1954. Every effort must be made during the remainder of this year to meet or exceed last year's record.

Public Relations Conference Set for Boston

Plan now to attend A.M.A.'s eighth National Medical Public Relations Conference November 28 at the Hotel Statler, Boston, to find out about the medical profession's plans for next year in the fields of legislation, public relations and medical service. The program also will include discussions on our free enterprise system and on America's future by outstanding speakers from all over the country.

One of two annual public relations meetings conducted by A.M.A. as a service to local medical societies, the Conference is especially geared to society officers and committee chairmen who establish PR policy.

* * *

A.M.A. Forms New Committee on Geriatrics

Problems of the aging will be up for careful scrutiny by a newly formed Committee on Geriatrics of the A.M.A.'s Council on Medical Service. The group is expected to hold an organizational meeting in Boston following the ninth Clinical Session. The following members have been selected so far: Drs. Henry Mulholland of Charlottesville, Virginia, (a member of the Council) chairman; Edward L. Bortz, Philadelphia; Theodore J. Klumpp, New York, and Wingate M. Johnson, Winston-Salem. Three others will be appointed later, bringing the total committee to six plus a chairman.

* * *

New Radio Series Features "Facts" on Diseases

On a hunt for the "facts" surrounding various diseases, the American Medical Association has come up with the answers in a new series of 13 electrical transcriptions for use on local radio stations. Entitled, "Facts," the programs discuss significant progress in major areas of medicine like heart surgery, cancer, mental health and multiple sclerosis. Each program—a drama with summary by an outstanding medical authority in the field—is timed for a 15-minute radio slot.

Titles include: rheumatic fever, infantile paralysis, arthritis, epilepsy, multiple sclerosis, growing old, breast cancer, tuberculosis, leukemia, mental health, heart surgery, hypertension and cerebral palsy. For further information, write the Bureau of Health Education.

* * *

A.M.A. Sponsors Conference on Hazards of Chemicals

Thousands of common home, industrial, and agricultural chemicals may be potential killers. To insure proper handling of these products, the A.M.A.'s Committee on Toxicology and Committee on Pesticides will sponsor a symposium on health hazards of chemicals in Atlanta on December 29 during the annual meeting of the American Association for the Advancement of Science. Representatives of the Food and Drug Administration, U. S. Public Health Service, Preventable Diseases Service of the Georgia Department of Health, and the A.M.A. Committee on Cosmetics, as well as many physicians, will be in attendance.

JOINT BLOOD COUNCIL

The Joint Blood Council has announced establishment of its national headquarters in Washington and the election of Dr. Frank E. Wilson of Washington as its executive vice president and secretary. As executive vice president of the new nonprofit organization, Dr. Wilson will carry out policies determined by the Board of Directors.

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The Joint Blood Council is a completely voluntary group, formed by the five national associations principally concerned with procuring, processing, preserving, and distributing blood and blood derivatives. Its objective is to coordinate all activities in this field, including the interchange of blood, the standardization of cross-matching and typing procedures, the accreditation and inspection of blood banks, the stimulation of blood donor campaigns and the encouragement of research. In time of emergency, the council will be prepared to assist in setting up new blood banks and to handle requests of the military forces for blood and blood derivatives.

Joined in the new venture are the American Association of Blood Banks, the American National Red Cross, the American Medical Association, the American Hospital Association and the American Society of Clinical Pathologists, which have equal representation on the council's board of directors.

Dr. Leonard W. Larson of Bismarck, N. D., is president of the Council, Dr. Merlin L. Trumbull of Memphis vice president, and Dr. Karl S. Klicka of Chicago treasurer. In addition to these three officers, the directors are: Drs. David N. W. Grant of Washington, James J. Griffiths of Miami, Donald H. Kaump of Detroit, Frank W. Konzelmann of Washington, Edwin L. Crosby of Chicago, Walter B. Martin of Norfolk, and Mr. Charles H. Kellstadt of Atlanta.

Dr. Wilson has been with the American Medical Association's Washington Office for seven years, and its director for the last three years. He has had previous experience developing blood bank programs and was the first secretary of A.M.A.'s Committee on Blood.

UNITED CEREBRAL PALSY

Leonard W. Mayo, Ph.D. of Westport, Connecticut, director of the Association for the Aid of Crippled Children, addressed the United Cerebral Palsy Annual Convention, held at Boston's Hotel Statler on November 11, 12 and 13.

Mr. Mayo's topic was "The Future of Specialized Health Agencies in the United States." He was introduced by Dr. H. Houston Merritt, of Bronxville, New York, director of the Service of Neurology at the Neurological Institute, Columbia-Presbyterian Medical Center, and chairman of the Medical-Professional Executive Board of United Cerebral Palsy.

Dr. Merritt, who presided at the luncheon session, is a vice president of United Cerebral Palsy. He was recently elected to the Executive Committee of the newly-organized Research and Educational Foundation. The Foundation, established by United Cerebral Palsy and a group of interested industrialists, plans to accelerate the research attack on the complex problem of cerebral palsy.

MISSISSIPPI VALLEY MEDICAL SOCIETY

The attention of physician medical writers is called to the Mississippi Valley Medical Society Annual Essay Contest. Any subject of general medical or surgical interest including medical economics and education may be submitted, providing the paper is unpublished and is of interest and applicable value to general practitioners of medicine.

Contributions are accepted only from physicians who are members of the American Medical Association and who are residents and citizens of the United States. Manuscripts must not exceed 5000

words and be submitted in five complete copies, in manuscript style. The winning essay receives a cash prize of \$100.00, gold medal, and a certificate, also an invitation to address the annual meeting of the Mississippi Valley Medical Society, which is held at the same time and place as the annual meeting of the American Medical Writers' Association. (1956 meeting, Hotel Morrison, Chicago, September 26, 27, 28.) The Society may also award certificates of merit to physicians whose essays rate second and third best.

Essays must be in the office of the Secretary of the M.V.M.S. not later than May 1, 1956. Winning essays are published each year in the January number of the *Mississippi Valley Medical Journal* (Quincy, Illinois). Further details may be secured from the Mississippi Valley Medical Society, Harold Swanberg, B.S., M.D., F.A.C.P., Secretary, 209-224 W. C. U. Building, Quincy, Illinois.

* * *

The November issue of the *Mississippi Valley Medical Journal & Radiologic Review* (Quincy, Illinois) is the eighth annual radiation therapy number of the publication. It contains 16 original articles, especially written for this number, which should appeal to non-radiologists and help acquaint them with some of the accomplishments of radiation therapy.

The January issue of the *Mississippi Valley Medical Journal* will contain the papers presented at the recent St. Louis meeting of the American Medical Writers' Association and the winning essays of the 1955 Mississippi Valley Medical Society annual essay contest.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS

Dr. Ralph R. Simmons, medical director of the Equitable Life Insurance Company of Iowa, Des Moines, has been elected president of the Association of Life Insurance Medical Directors of America at its sixty-fourth annual meeting at the Hotel Statler.

Dr. Simmons will succeed Dr. Richard L. Willis, chief medical director of the Mutual Life Insurance Company of New York, whose term of office ends at the conclusion of the annual meeting.

More than 250 physicians representing life insurance companies in the United States, Canada and South America attended the meeting.

NATIONAL VITAMIN FOUNDATION

Appropriations for grants-in-aid of research by the National Vitamin Foundation during 1954 amounted to \$151,333.33 and for educational purposes \$21,330.99, a total of \$172,664.32, the report said.

The National Vitamin Foundation, Inc., was organized in 1946 by producers and distributors of vitamins and related products to promote and support studies of nutrition in both health and disease, particularly as they relate to vitamins, and to initiate and encourage research in any way relating to medicine and health.

"During the past nine years the Foundation has been a major contributor to the advancement of the science of nutrition," Dr. Goodhart said. "The total of the implemented and payable appropriations in the areas of research and education made by the Foundation since its incorporation amounted to \$1,034,466.87.

AMERICAN MEDICAL WRITERS' ASSOCIATION

At the twelfth annual meeting of the American Medical Writers' Association held at St. Louis last September, the following officers were elected for 1956: President-Elect, Dean F. Smiley, M.D., Chicago, Editor, *Journal of Medical Education*; First Vice President, Russell L. Cecil, M.D., New York, emeritus professor of medicine, Cornell University; Second Vice President, Austin Smith, M.D., Chicago, Editor of the *J.A.M.A.*; Editor, Charles E. Lyght, M.D., Rahway, New Jersey, associate medical director, Merck & Co., Inc., (re-elected);

Accounting Officer, Kenneth H. Schnepf, M.D., Springfield, Illinois, Former Editor, *Bulletin, Sangamon County Medical Society (Ill.)*; Secretary-Treasurer, Harold Swanberg, M.D., Quincy, Illinois, Editor, *Mississippi Valley Medical Journal & Radiologic Review* (re-elected).

The Association has had a very successful year, is in good financial condition, and its rapid growth continues. (more than 800 members). The 1956, Thirteenth Annual Meeting, including a Workshop on Medical Writing, will be held at the Hotel Morrison, Chicago, September 28-29, during the twenty-first annual meeting of the Mississippi Valley Medical Society at the same hotel.

PAN AMERICAN SANITARY BUREAU

Medical care in rural areas and the education of public health personnel were this year's subjects for the technical discussions held during the eighth meeting of the Pan American Sanitary Organization's Directing Council, which sits also as the Regional Committee of the World Health Organization. Such discussions have taken place at annual P.A.S.O. meetings since 1951, following the pattern established by the World Health Assembly in 1949. These gatherings of health professionals from many countries afford an unusual opportunity for an exchange of views on subjects normally outside the scope of the regular agenda.

* * *

Dr. Paulo A. C. Antunes, former Secretary of Public Health of the Brazilian State of Sao Paulo and a leading authority in public health, has spent a week at the Pan American Sanitary Bureau, Regional Office of the World Health Organization, in consultation with the Bureau Director, Dr. Fred L. Soper, on the program for continent-wide eradication of malaria.

Of special interest in the discussions was the 20-million dollar eradication program launched this autumn by the Mexican Government in furtherance of the Bureau's intensive drive to wipe out malaria from the Hemisphere within the next few years, before the insect that spreads the disease, the *Anopheles mosquito* has time to develop such resistance to DDT as to make the task much more difficult and costly.

DEPARTMENT OF THE ARMY

Major General James O. Gillespie, Chief of the Professional Division in the Office of The Surgeon General, received the second stars of his new rank in a ceremony held in the Office of The Surgeon General, Thursday, October 20. He is responsible for professional activities of the Army Medical Corps including medical, surgical, psychiatry and neurology, physical standards, physical medicine, and pathology and allied sciences.

ATOMIC ENERGY COMMISSION

Dr. Charles L. Dunham has been appointed director of the Atomic Energy Commission's Division of Biology and Medicine, effective October 1. Dr. Dunham succeeds Dr. John C. Bugher, director of the Division since July 1, 1952. Dr. Bugher will return to the Rockefeller Foundation, which recently announced his appointment as director of Medical Education and Public Health.

Dr. Dunham has been Deputy Director of the Division of Biology and Medicine since July, 1954. He was Chief of the Medical Branch of the Division from August, 1949, until his appointment as Deputy Director.

* * *

Thirteen leading doctors and surgeons from 12 countries have begun a five-week tour of atomic medical facilities in the United States.

This is the second medical group to make a visit of this kind and the project, part of President Eisenhower's atoms-for-peace program, is sponsored by the U. S. Atomic Energy Commission and the U. S. Department of State. The American Council of Education will be in charge of arrangements for the group. A similar tour in June and July of this year included 23 medical men from 12 nations.

VETERANS ADMINISTRATION

More than 500 successful non-human heart surgery operations have been performed with the aid of a simple pump developed at the Veterans Administration hospital in Nashville, Tennessee, with the result that its use on humans now is considered imminent.

Dr. Frank Gollen of the Nashville staff who, with associates developed the pump described as "no bigger than a Tennessee Jigger," offered the scientifically-cautious admission that it may be used for human surgery in the near future.

* * *

Severely disabled Korea veterans are entering vocational rehabilitation training at a much greater rate than veterans with lesser disabilities, a Veterans Administration study disclosed today. VA said the reason appears to be that the severely handicapped are not content with sitting on the sidelines. They, most of all, need the help of rehabilitation in making a comeback to productive living—and they have done something about getting it.

According to the VA study, one out of every five Korea veterans with disabilities rated at 60 per cent or more have enrolled for training thus far.

Forty per cent of the trainees have orthopedic disabilities; 20 per cent have had nervous or mental conditions; 10 per cent have had respiratory ailments; 7 per cent, heart conditions, and the remainder a wide variety of other disabilities.

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Medical Journal



Vol. 16 No. 12
December, 1955

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CONGENITAL MALFORMATIONS OF THE HEART — HARRIS

INDEX TO VOLUME 165

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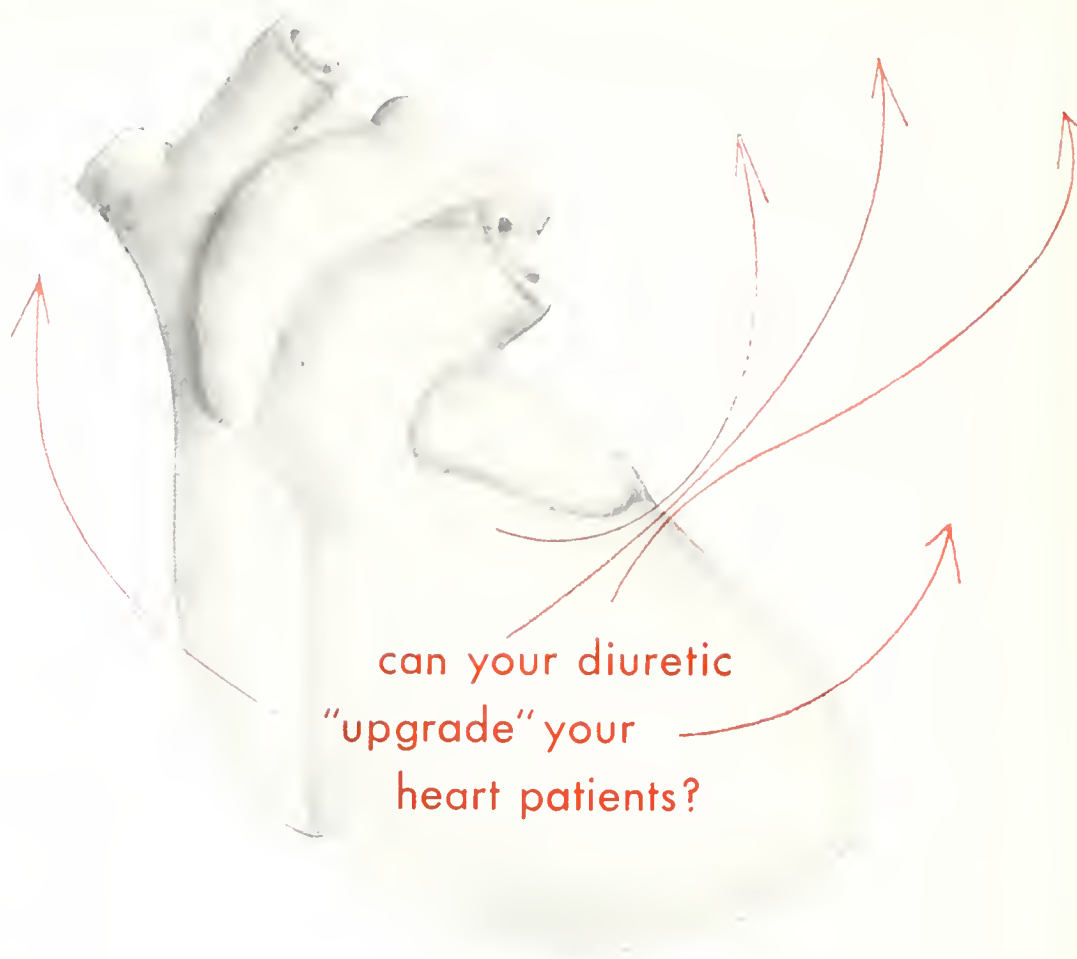
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THE DIAGNOSIS OF SURGICALLY CORRECTABLE CONGENITAL MALFUNCTIONS OF THE HEART

JEROME S. HARRIS, M.D.

DURHAM

Since 1939 an increasing number of congenital cardiac abnormalities have come within the orbit of corrective surgery. New developments in refrigeration anesthesia and extracorporeal circulation, which allow isolation of the heart from the circulation, should soon permit extensive operations upon the interior of the heart, the veins and great vessels so as to increase vastly the variety of correctable abnormalities. Although the unraveling of rare complicated anomalies still requires the efforts of a team of experts with an incredible amount of expensive equipment (only too frequently aided by a pathologist for the final and correct diagnosis), many of the surgically correctable abnormalities may be diagnosed by the application of simple physiologic reasoning to the results of an ordinary physical examination, electrocardiogram, and chest roentgenograms.

Classification

To accomplish this purpose, it is necessary to establish a broad classification as a framework for diagnosis. Nonsurgical conditions must be included, since they must be diagnosed in order to avoid unnecessary surgery.* A simplified classification is given in table 1, where the surgically correctable lesions are emphasized. The anomalies are

first divided between those that are predominately cyanotic and those that are primarily acyanotic (in the absence of cardiac failure and pulmonary complications such as pneumonia, infarction and vascular sclerosis). The latter group may be divided into those without shunts (IA) and those with left to right shunts (IB). Those without shunts have a normal or decreased pulmonary circulation and comprise obstructions to the flow of blood, anomalously situated vessels, and a group of miscellaneous and unrelated conditions. Many of these patients present specific symptoms or signs which are almost diagnostic in themselves. Thus the presence of a lower blood pressure in the leg than in one or both arms indicates a coarctation or obstruction between the origin of one of the subclavian arteries and the descending aorta. This is readily detected by palpation of the femoral vessels and by comparison with the radials. Were this procedure a routine part of a physical examination, coarctations would be diagnosed more readily and earlier in life. Rib notching and other evidences of collateral circulation are late signs.

Anomalous origin of the left coronary artery from the pulmonary artery, and disturbances of rhythm such as paroxysmal tachycardia give characteristic electrocardiographic findings and episodic symptoms which are similar to analogous conditions in the adult and need detain us no longer. Anomalies of the aortic arch perhaps should not be included here since they are not strictly cardiac abnormalities; but, because they are correctable by surgery, it should be stated that they usually do not cause car-

From the Department of Pediatrics, Duke University School of Medicine, Durham, North Carolina.

Read before the Section on Pediatrics, Medical Society of the State of North Carolina, Pinehurst, May 3, 1955.

*The commonest anomalies in 500 patients with congenital heart malformations seen in the Duke Pediatric Cardiac Clinic from 1947 to 1952 were patent ductus, septal defects, tetralogy, coarctation and pulmonary stenosis. Fortunately these conditions can be aided by surgery with a good chance of success except in the case of ventricular and large atrial septal defects. In contrast, transposition was a common anomaly in very young infants admitted to the hospital for study.

Table 1

Classification of Congenital Heart Disease

- I. Primarily acyanotic in absence of failure
 - A. Without shunts
 1. Vascular anomalies: **anomalous aortic arches**; anomalous origin of coronary arteries
 2. Obstructions: **aortic coarctation**; aortic, subaortic and mitral stenosis; fibroelastoses, **cor triatriatum**, **pulmonary stenosis**, Ebstein's disease (last three may be associated with shunts)
 3. Miscellaneous: Disturbances of rhythm; glycogen storage disease; idiopathic hypertrophy
 - B. With left to right shunts (increased pulmonary circulation)
 1. Left ventricular hypertrophy; **Patent ductus**; aortico-pulmonary septal defect
 2. Balanced hypertrophy: **Ventricular septal defect**; early Eisenmenger complex
 3. Right ventricular hypertrophy; **atrial septal defect**; **anomalous insertion of pulmonary veins into vena cava or right atrium**
- II. Primarily cyanotic
 - A. With increased pulmonary circulation: single ventricle; transposition; Bing-Taussig syndrome, truncus arteriosus, aplasia of the left side of the heart with persistent ductus
 - B. With decreased pulmonary circulation (right-sided obstruction plus shunt)
 1. Right ventricular hypertrophy
 - a. Pulmonary vascular obstruction: Eisenmenger complex (late)
 - b. Pulmonary valve or infundibular obstruction: **Tetralogy of Fallot**; **pulmonary stenosis with patent foramen ovale or atrial septal defect**.
 2. Left ventricular hypertrophy
 - a. **Tricuspid stenosis or atresia with defect of atrial septum**
 - b. Ebstein's disease (late)
- III. Intrapulmonic shunts
 - A. With cyanosis: **pulmonary artero-venous fistula**
 - B. Without cyanosis: **pulmonary artery arising from aorta (with or without pulmonary sequestration)**

diac symptoms but rather cough, difficulty in swallowing, hoarseness, atelectasis, chronic pulmonary difficulties, and occasionally episodes of cyanosis. The presence of any of these warrants a radiologic examination of the esophagus which may show anomalous indentions. Rarely abnormalities of the aortic arch cause upper lobe atelectasis and do not involve the esophagus, so that the condition can be detected only at bronchoscopy.

*Acyanotic Conditions**Without shunts*

Obstructions which do not cause cyanosis may occur anywhere along the course of the circulation within the heart (IA²). If present in the region of the tricuspid valve

(pure tricuspid stenosis and malformations such as Ebstein's disease), the obstruction produces a decreased pulmonary circulation, a large right atrium, and a left axis deviation. Ebstein's malformation usually shows, in addition, a right bundle branch block and intraventricular conduction delay. If the obstruction is in the region of the pulmonary valve, marked right ventricular hypertrophy results. A characteristic loud, rough, rasping systolic murmur in the second left interspace with a relatively pure second sound confirms the diagnosis. Although the overall pulmonary circulation is decreased as shown fluoroscopically by quiet peripheral lung fields, the main pulmonary artery and its primary branches may exhibit pulsations because of the phenomenon of post-stenotic dilatation.

Obstructions on the left side of the heart may be produced by a partial septum in the left atrium (cor triatriatum) or stenosis of the mitral valve. In either case the symptoms and signs will be similar to those of acquired mitral stenosis, though the left atrium may be small in cor triatriatum. It is important to remember that these lesions, resembling rheumatic heart disease, may be congenital and that both are correctable by surgery. As in rheumatic mitral obstruction, the apical crescendo diastolic murmur, right ventricular hypertrophy, and congested lung fields are present.

By contrast, obstructions in the aortic valve regions (aortic stenosis, sub-aortic stenosis) generally cause enlargement of the left ventricle, and are inoperable. The diagnosis is suggested, not only by the electrocardiograms and the characteristics of the pulse, but also by the typical, extremely harsh, loud and rasping systolic murmur, which is heard best at the base to the right of the sternum. Endocardial fibroelastosis may cause a similar picture when the thickened endocardium in the left ventricle interferes with the propulsive mechanism of the heart.

Although the diagnosis of the idiopathic hypertrophies, such as glycogen storage disease, is extremely difficult to make and is usually performed by exclusion alone, these are not surgically correctable and usually cause death within the first few months of life. It should be remembered that myocar-

ditis can occur at any age and be confused with congenital heart disease.

Conditions with left-to-right shunt

The second large group of acyanotic conditions are those associated with a left-to-right shunt (IB). The resultant increased pulmonary circulation usually produces loud, reduplicated basal second sounds, full and active lung vascular markings, and excessive pulsations of the hilar vessels.

The exact effects of the shunt depend upon its location. Shunts between the aorta and pulmonary artery, either through a patent ductus arteriosus or an aortico-pulmonary septal defect characteristically produce a continuous whirring or machinery-like murmur, since the flow of blood is in one direction during all phases of the cardiac cycle. The murmurs are heard best in the second left interspace in the case of the ductus, and lower down and more superficially in the aortico-pulmonary septal defect. The shunted blood passes only through the pulmonary artery, lungs, left atrium, left ventricle and aorta (but not right ventricle), thereby causing increased pulmonary vascular markings, enlargement of the left atrium, and left ventricular hypertrophy. These can be detected by x-ray and electrocardiographic examination. Peripheral signs suggestive of aortic regurgitation are produced by the flow out of the aorta through the shunt. When extreme pulmonary hypertension is present, however, the flow through the ductus diminishes so that the peripheral signs are less marked and the murmur may be atypical. This may progress to reversal of the shunt and the production of cyanosis, which, because of the location of the ductus, is more marked in the lower extremities than in the upper. Atypical signs are also seen in infancy, when the diastolic component of the machinery-like murmur is usually absent.

Shunts through an interventricular defect produce balanced cardiac enlargement, since both left and right ventricles share in the propulsion of the shunted blood. Frequently the electrocardiogram is characteristic in demonstrating combined hypertrophy with a *RsR'* configuration in lead V1 and an upright QRS in V6. The murmur is also characteristic—a very loud, harsh systolic murmur heard best just to the left of the lower

sternum. In the atrial septal defects and anomalous insertions of the pulmonary veins into the right atrium, the shunted blood tranverses the right atrium and ventricle but not the left ventricle. Right axis deviation and right ventricular hypertrophy therefore result—not infrequently sufficient to produce a precordial bulge. The patients are characteristically frail and susceptible to respiratory infections. Murmurs are systolic, but not diagnostic, since they may be absent or quite loud and located from the second to fourth interspaces to the left of the sternum. Right bundle branch block and disturbances of rhythm occur not infrequently. Incidentally, it should be remembered that conditions which increase markedly the flow of blood through either atrio-ventricular valve may cause a rumbling diastolic (mitral stenotic type) murmur because of the turbulence of the excessive amount of blood passing through a normal valve. It is heard in patent ductus as well as atrial septal defects, and disappears following closure of the shunt. These murmurs do not necessarily suggest complicating lesions such as the Lutembacher syndrome (atrial septal defect with mitral stenosis).

Cyanotic Conditions

Primarily cyanotic conditions are best classified according to whether the pulmonary circulation is decreased (IIB) or increased (IIA). In the latter case, the condition is usually associated with a large heart, is serious, and most often is not amenable to surgery. Particularly ominous is the triad of severe cyanosis, large heart, and full pulmonary vascular fields in a very young infant.

When cyanosis is associated with a diminished pulmonary circulation (IIB), however, the outlook is better and surgery can frequently help. Here the heart characteristically is small (as in the tetralogy), since one portion of the circulation, the pulmonary, has a small flow. These conditions are produced by a block proximal to the lungs which causes high pressure in the right side of the heart and reverses the direction of flow in a shunt, such as an interventricular septal defect, which ordinarily flows from left to right in the absence of an obstruction. Valvular and infundibular stenosis

thus causes right ventricular hypertension and reverses the flow of blood through atrial or ventricular septal defects, causing peripheral cyanosis. Diagnosis is suggested by the right ventricular hypertrophy, pure second sound, diminished pulmonary circulation and a boot-shaped heart. This configuration is the result of a large right ventricle and a small or misplaced pulmonary artery. Dyspnoea and increased cyanosis on exertion, squatting, and attacks of paroxysmal dyspnoea and cyanosis are suggestive clinical features.

When the obstruction is in the region of the tricuspid valve (stenosis or Ebstein's malformation of the tricuspid valve), the blood will in part by-pass the right ventricle through an atrial septal defect, if one is present. This diminishes the work of the right ventricle and increases that of the left, resulting in left ventricular hypertrophy and a small right ventricle. Thus a left axis deviation in a cyanotic child is highly suggestive of a tricuspid stenosis and atrial defect.

Pulmonary Shunts

Pulmonary shunts (III) have been included, since a pulmonary arteriovenous fistula allows unsaturated blood to pass unchanged through the lung and return to the left atrium, producing systemic cyanosis and mimicking a congenital cyanotic heart lesion. The diagnosis is suggested by the characteristic localized pulmonary vascular density in the roentgenogram and is readily correctable by pneumonectomy.

Precautions

On the opposite side, I would like to warn against the easy error of making a diagnosis of congenital heart disease on the basis of a functional murmur or a venous hum. The latter can accurately mimic the machinery murmur of a patent ductus, if the patient is upright. Listening when the patient is supine clarifies the diagnosis, since the venous hum disappears. The frequency of functional murmurs is very high—they were heard in over 20 per cent of sixth grade children on one examination. The humming quality, usually parasternal location, and diminution on exercise or sitting up aids in the differentiation. More troublesome are the murmurs which are heard during the early neonatal period. Most of these will

disappear before the age of 1 year, but require careful periodic examinations.

The signs and symptoms of congenital cardiac disease may be quite atypical in the first few months of life. Thus it is well known that coarctation may be associated with right ventricular hypertrophy in early infancy—probably because of the peculiarities of the fetal circulation. Patent ductus may cause only a systolic murmur early in life. Obvious cyanosis may be absent during the first six months of life in a patient with a typical tetralogy. Many other differences which distort the familiar picture of certain anomalies and obscure the diagnosis are noted in early life. Most important is the fact that certain operable lesions may cause serious cardiac failure in early life and fail to show the usual classic symptoms. Such conditions as patent ductus, septal defects, and coarctation should be considered first and eliminated from diagnosis by catheterization and angiograms if necessary, since surgery may be life-saving.

Conclusion

A rational approach to the difficult diagnostic problems presented by congenital heart malformations may be made by considering the disturbances presented by each patient against the background of a classification based upon the altered physiology resulting from various anomalies. In addition, many common malformations present characteristic features which suggest and confirm the proper diagnosis.

Premedical training: This raises the question of a specific premedical course or training. I am convinced that, as laid down at present, not only is it not necessary but that it is in part responsible for the present disappointing results in medical education. The student is denied broader cultural training at the very time when he should be having it. He is fitted into the medical mould too soon. Young physicians with whom I have discussed this question insist that the place for a broad educational programme is in the high school. They say that if one waits until the medical course proper to introduce courses in history or the social sciences, it is too late. The grafts will not take. This fact is being realized, and authorities are beginning to consider for the premedical years a programme of general education, well planned and not diluted by too many superficial electives, with sufficient instruction in science to illustrate the broad principles of the subject.—Scarlett, E. P.: *Tangibles and Intangibles in Medical Education*, Canad. M.A.J. 73:87 (July 15) 1955.

THE TEMPORAL LOBE

ROBERT STROBOS, M.D.

WINSTON-SALEM

This paper is an attempt to evaluate the functions of the temporal lobe in the light of much new data obtained in recent years. The following order of presentation has been selected: (1) anatomy; (2) stimulation experiments; (3) ablation experiments; (4) temporal lobe epilepsy, and (5) a theoretical discussion.

Anatomy

Several of the special senses are cortically represented in or close to the temporal lobe. It is well known that the auditory fibers project to the superior temporal gyrus and that there is probably vestibular projection in a closely adjacent area. The inferior part of the optic radiation runs deep in the white matter of the temporal lobe on its way to the occipital cortex. The sense of taste is probably not represented in the temporal lobe, but in the cortex at the base of the post-central gyrus.

Until fairly recent years, a large part of the temporal lobe was thought to be concerned mainly with olfactory functions. This concept has been attacked from many sides, and an excellent review of this subject by Brodal⁽¹⁾ is available. The old concept of the so-called "rhinencephalon" has been severely criticized, and this view warrants some discussion. Anatomic and electrical studies have revealed that fibers from the olfactory bulbs and tracts project to the uncus, prepyriform area, and possibly amygdaloid nuclei, but that there is but little projection from these areas to the rest of the temporal lobe. Only a few fibers have been traced to the hippocampus, and then only to its anterior part, which is rudimentary in mammals. If we also consider that the hippocampus is sometimes well developed in anosmatic animals and reaches its greatest size in man, in whom the sense of smell certainly does not seem of great importance, it is doubtful that the hippocampus would have an olfactory function.

It must also be stated that bilateral re-

moval of the temporal lobes in dogs or monkeys does not impair the sense of smell. Therefore, even if the uncus and prepyriform area have a relation to smell, it is at most that of an olfactory association area.

As regards the hippocampus, this structure, connected mainly with its fellow on the opposite side through the anterior commissure, projects by way of the fornix to the hypothalamus, and especially to the medial mammillary nuclei. From here a tract descends into the brain stem, while the bundle of Vicq d'Azyr ascends to the anterior nuclei of the thalamus. The anterior thalamic nuclei, in turn, project to the cingulate gyri in a fairly specific area-to-area fashion. In the cingulate gyrus, short association fibers run backward, and anatomic and physiologic neuronography techniques have made it likely that finally these fibers project to the entorhinal area and the hippocampus.

Thus there is a suggestion of a closed circuit, or possibly a feed-back circuit consisting of anterior medial surface of the temporal lobe: hippocampus—fornix—mammillary nuclei—bundle of Vicq d'Azyr—anterior thalamic nuclei—cingulate gyrus, and then back to the medial surface of the temporal lobe and the hippocampus. This circuit will be referred to hereafter as the hippocampal projection system.

The anterior-medial surface of the temporal lobe is closely linked up with this system. It seems evident that this area has completely different connections from those of the lateral temporal cortex. As regards the latter part, Lashley's and Clark's conclusions of their anatomic studies⁽²⁾ may suffice. They state that the lateral part of the temporal cortex is strongly interconnected with the parieto-occipito-temporal border area. As a matter of fact, it seems impossible to divide this general cortical region into separate areas with precise cyto-architectural boundaries. It would, therefore, seem likely that this general area is closely integrated in its function.

Too much space would be required to discuss adequately all other data regarding cortico-cortical and subcortical connections of the temporal lobe, and we will stop here, having explored these two different systems which will enable us to understand other data more clearly.

Read before the Section on Neurology and Psychiatry, Medical Society of the State of North Carolina, Pinehurst, May 4, 1955.

From the Department of Neurology and Psychiatry, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

Stimulation Experiments

From the anterior and medial aspects of the temporal lobe, many autonomic responses have been obtained by electrical stimulation. The respiratory and vasomotor systems especially are influenced, one of the most consistent effects being transient respiratory slowing or arrest. Changes in pulse rate and blood pressure have also been recorded.

For our present purpose it is most interesting to observe the results of stimulation of the uncus in conscious patients. This may cause profound alteration of consciousness. The patient stops responding and later on has an amnesia for this period. It is important that such changes in consciousness may occur independently from any alterations in respiration.

Ablation Experiments

Data in man are far from definite. Ablations of part of the temporal lobe have been performed in schizophrenic and epileptic patients. In the first instance, results have been, in general, disappointing. In the second instance, good results have been obtained as regards reduction in the frequency of or abolition of the seizures. However, no specific changes in the personality or behavior are described as a result of these operations.

There are more definite reports about changes in monkeys which have undergone similar operations. Let us first consider changes as observed after bilateral ablations of the lateral temporal cortex. Here it is interesting to note that this area seems to be closely connected in its functioning with the lateral cortex of the occipital and parietal lobes. Removal of either lateral-temporal cortex alone or lateral-occipital cortex alone does not cause any loss of visual discrimination. Yet, a combination of these extirpations permanently abolishes visual discrimination. The recent experiments of Blum, Chow and Pribram⁽³⁾ are the most valuable. Their conclusion is that the parieto-temporo-occipital region probably acts as a whole in the integration of somatosensory, visual and probably other sensory impulses, and that impairment of these functions is dependent upon the amount of cortex removed as well as the site of ablation. The lateral temporal cortex appears to be especially im-

portant as regards sensory integration, and whenever deficits followed ablation of parietal or occipital areas, these specific deficits were greatly increased by additional removal of lateral temporal cortex. The deficits consist, in general, of impairment of visual discrimination, impairment of sensory appreciation and also of less reaction to noise and calls of other monkeys.

Originally much was made of the complete visual, auditory and tactile agnosia that occurred after bilateral complete temporal lobectomy, but according to later studies, this is probably due to a combination of several factors, especially including damage to the optic tracts with its resulting impairment of visual acuity and visual fields.

Ablation of the medial or rhinencephalic structures of the temporal lobes bilaterally caused profound emotional changes characterized by absence of anger and fear, loss of affectivity, diminished sexual interest, and loss of maternal instincts. These monkeys were transformed into tame, fearless, and asocial creatures.

This deficient instinctual behavior may be explained in different ways. Either there must be a loss of instinctual drive, or a loss of the ability to express this drive, or one must assume that the impact of the situation on the animal is not well appreciated because of a state of confusion and impairment of normal awareness. As there is no reason to believe that the temporal lobe is the seat of instinct or that impairment of motor ability is present, one feels inclined to accept the last explanation, and there are other experiments which seem to lend some weight to this hypothesis. Ablations of other areas in the hippocampal projection system, especially of the cingulate gyri or mammillary bodies, may give results very similar to the ones observed after medial temporal lobectomy. Yet, in some instances, somewhat different results were obtained in which the monkeys became stuporous or drowsy and sat for hours in the same position, with marked decrease of awareness and activity. Some experimenters use the term "protracted twilight state" in an attempt to describe these animals. As the same area is removed, it is likely that these different results vary only in degree and not in real quality. We may then assume that the personality changes as described before are re-

ally the result of an impairment of consciousness to a less severe degree than the twilight state occurring in similar preparations. This would suggest that the hippocampal projection system is important in maintaining alert awareness.

Temporal Lobe Epilepsy

Hughlings-Jackson⁽⁴⁾ was the first to draw attention to the temporal origin of epileptic dreamy states. Since then several types of aura have been described, such as depersonalization, derealization, *deja-vu* sensations, episodes of confusion with or without visual or auditory hallucinations, as well as sudden episodes of fear or acute depression. In addition, there may be olfactory hallucinations, gastric, vestibular or cardiac sensations, and often smacking, chewing or other stereotyped repetitive movements.

Of late, additional confirmation for the temporal origin of these seizures has been obtained with electroencephalographic studies, electrical stimulation of the temporal lobes in patients with epilepsy, and surgical removal of the affected part of the brain.

How do we explain these auras? Epileptic discharge has, in general, two effects—a positive phase of excitation and a negative phase of inactivity. In areas with a complex function, the effect is usually only observable in its negative aspect, such as inability to speak upon stimulation of the areas concerned with speech. If one considered the effects of temporal lobe stimulation as a positive response, one might draw the conclusion that the temporal lobe is concerned with many unrelated mechanisms (aggression, fear, destructive impulses, memory, dreaming, rational behavior, and so forth.) It has been suggested that the temporal lobe is indeed the site of memory. Yet the electrically evoked “memories” are almost never pure recollections, but have actually the quality of dreams in which, of course, many elements from the life of the patient are recognizable. Also, the results of ablation experiments are difficult to explain on the basis of this assumption.

Jasper⁽⁵⁾ has stressed the negative aspects of stimulation and defined temporal lobe epileptic phenomena as caused by paralysis of rational behavior and memory. It is, however, possible to explain the situation in

simpler terms. The common denominator of the different temporal auras is the reduction of awareness, of lowering of the level of consciousness without actual loss of consciousness. Of course, the content of the aura is always different and is apparently of psychologic nature related to and determined by the personality and history of the patient. The form is always characterized by clouding of consciousness to different degrees. This explanation is also in agreement with our conclusions on ablation experiments, especially if one considers the recent evidence that in these seizures lesions in the medial and inferior parts of the temporal lobe are most frequent.

Theoretical Discussion

Let us briefly restate some of the previous data. The tempero-parieto-occipital association area, between the primary sensory projection fields, is mainly concerned with the elaboration and integration of incoming impulses from the outer and inner world. This cortical field includes the entire lateral surface of the temporal lobe and is on the dominant side interwoven with an area significant for the understanding of language and, thus, with the expression of this inner and outer orientation into abstract symbols.

Another anatomic system consists of the anterior and medial part of the temporal lobe and its connection with the hippocampal projection system. The data presented led to the hypothesis that this system plays an important part in the maintenance of alert awareness. We saw that stimulation of the uncus in man may obscure consciousness. Ablation of the medial and anterior part of the temporal lobes in monkeys caused changes in behavior that were most easily explained by postulating a clouding of consciousness. Typical features of temporal lobe epilepsy seem to have as a common denominator impairment of consciousness to different degrees.

Some data available on other parts of the hippocampal projection system that seem to confirm this hypothesis have already been presented. In addition we may mention that stimulation of the mammillary bodies produces diffuse sympathetic discharge and a generalized alerting effect on the whole cortex. Removal of the mammillary bodies cause the opposite effect—that is, drowsi-

ness and stupor. The cingulate gyrus is closely related to the medial temporal lobe as regards the results of stimulation and ablation.

We would then define the temporal lobe as being concerned, together with the occipital and parietal parts of the lateral surface of the brain, with the orientation in the self and in the environment. Additionally, and in dynamic relation to this, the temporal lobe influences and regulates alertness, awareness, and the state of consciousness in cooperation with the rest of the hippocampal projection system. These conclusions are very similar to those of Herrick⁽⁶⁾, who, on the basis of studies in comparative anatomy, considered the so-called "rhinencephalon" as a general activating, alerting and inhibiting system for all cortical activity. His theory has lately received additional support from Sloan and Jasper⁽⁷⁾ in connection with their experiments on the cingulate gyrus. Papez⁽⁸⁾, in his later publications, draws almost identical conclusions. He considers the rhinencephalon as important for keeping up the waking state. It would make the cortex receptive and provide a general dynamic background for more specific cortical activities. It is related to the margin of attention, while specific processes, as occurring in the lateral cortex, represent the focus of attention.

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Discussion

Dr. E. C. Kunkle (Durham): The many and mixed pieces of data which have been so clearly summarized form a complicated picture. They concern an area which until recent years was largely, as Grey Walter has phrased it, "considered out of bounds to respectable physiologists." One small zone, the amygdaloid nucleus lying near the anterior tip of the temporal lobe, has recently been analyzed by Dr. Peele in our neuroanatomic laboratories. His observations in cats, employing both

stimulation and ablation by use of the Horsley-Clarke apparatus, further extend evidence that this nuclear complex serves autonomic functions of eating, micturition and defecation, as well as an alert attention state.

We must be cautious, I believe, in considering the anatomic localization of "psychomotor" or "psychical" seizures. Dr. Strobos will agree, I hope, that the current tendency of some to assign a temporal origin for all such seizures is an unwarranted simplification. Studies of the effects of temporal lobe excitation, particularly by Penfield and his co-workers, and by Gastaut, have been highly productive, but it seems reasonably clear that not all psychomotor seizures arise from a temporal focus, nor, for that matter, are all temporal lobe discharges of a psychomotor type.

The speaker could not, within the limits of his time, deal critically with a topic of particular interest to an audience of neurologists and psychiatrists—namely, the issue of the role of temporal lobe disease as the cause of a chronic personality disorder. This is an increasingly provocative question: Can certain emotional illnesses represent non-ictal manifestations of a smoldering discharging cerebral lesion? If such be the case, the manifestation is of a novel kind: First, it is more complex and changing than the stereotyped movement or paresthesia evoked by electrical discharge in the motor or sensory strip; second, it is more sustained and less dramatic than a psychomotor seizure. Yet it might plausibly be compared to a psychomotor seizure drawn out in time, altered in quality, and attenuated in degree.

Evidence concerning this issue is elusive, and even the few favorable results of experimental ablation of temporal lobe lesions do not give decisive answers. Kubie has suggested the possibility of a more direct attack in selected instances, asking that the surgeon seek by electrical stimulation of the exposed brain in the conscious subject for areas from which specific memories of psychodynamic significance might be provoked. Whether the surgeon, armed with this information, could then do more for the patient than the psychotherapist with his more conventional tools is still the very large question.

The liberal arts and medical training: It is imperative, therefore, that liberal arts subjects and in particular the humanities be incorporated into the training of a physician, certainly in the earlier premedical years, and that the spirit thus fostered be carried forward into the undergraduate period. Such training does not decrease the student's professional aptitudes. Rather it provides unity and strength in the face of complexity and differences of the medical course. Sir William Osler had this in mind when he said:

"The wider and freer a man's general education, the better practitioner he is likely to be . . . In no profession does culture count for so much as in medicine, and no man needs it more than a general practitioner, working among all sorts and conditions of men, many of whom are influenced quite as much by his general ability, which they can appreciate, as by the learning of which they have no measure."—Scarlett, E. P.: Tangibles and Intangibles in Medical Education, *Canad. M.A.J.* 73: 86 (July 15) 1955.

AN ANALYSIS OF BACTERIAL SENSITIVITY TO CERTAIN DRUGS AS DETERMINED IN A HOSPITAL CLINICAL LABORATORY

ROBERT E. PERRY, JR., M.D.

DURHAM

The purpose of the following bacteriologic study was to determine the relative effectiveness of various commonly used antibiotics against organisms most frequently isolated in a hospital laboratory.

Methods

The specimens were taken from urine, blood, drainage from wounds, material from abscesses, and sputum. They were cultured as submitted, without any selection of material for this study. After the organisms were isolated, sensitivity tests were carried out utilizing pure cultures of the organisms. A heavy inoculation of the organism to be tested was made on the surface of a blood agar plate composed of a commercial blood agar base with the addition of 5 per cent of human blood. Bacto sensitivity disks (Difco) were then placed on the surface of the plate, spaced widely enough to allow for easy interpretation. The plates were incubated at 37 C. for 24 hours, and then read. If there was a zone of no growth of 10 mm. or more in diameter, the organism was said to be sensitive to that drug.

The concentrations of the drugs used were those most closely approximating the levels obtained in the body with the dosage usually employed⁽¹⁾. Each organism was tested against every drug evaluated in the study. The following drugs were used:

Chloramphenicol	30 mcg.
Dihydrostreptomycin	10 mcg.
Erythromycin	1 mcg.
Nitrofurantoin	10 mg.
Oxytetracycline	30 mcg.
Penicillin	1 unit
Tetracycline HCl	30 mcg.

Results

The results of this survey have been summarized in the accompanying tables. Table 1 shows the organisms isolated and the number of resistant strains found in each group. Sensitivity studies were done most frequently on gram-negative bacilli. This was

Table 1
Organisms Isolated and their Percentage of Resistant Strains

Organisms	Times Isolated	No. Resistant to All Drugs	Per Cent Resistant
<i>Micrococcus py.</i>	62	1	1.6
<i>Streptococcus py.</i>	33	0	0
<i>Escherichia coli</i>	50	9	18.0
<i>Pseudomonas aeru.</i>	45	18	40.0
<i>Aerobacter aero.</i>	28	1	3.5
<i>Proteus sp.</i>	27	5	18.5
<i>Paracolon sp.</i>	16	6	37.4
<i>Alkaligenes faec.</i>	1	0	0
TOTAL	262	40	15.2

Table 2
Effectiveness of Drugs Tested

Drug	No. Times Effective in 262 Tests	Per Cent
Chloramphenicol	175	66.7
Dihydrostreptomycin	64	24.4
Erythromycin	65	24.8
Nitrofurantoin	169	64.5
Oxytetracycline	106	40.4
Penicillin	31	11.8
Tetracycline HCl	72	27.4

to be expected, since most of the organisms were isolated from specimens of urine. Of interest was the high percentage of resistant strains found among the *Pseudomonas* and *paracolon* groups—40 and 37.4 per cent, respectively. Two hundred and sixty-two different cultures were tested, 15.2 per cent of which were resistant to all drugs.

Table 2 shows the effectiveness of the drugs tested. Of interest here is the relatively high percentage of effectiveness of chloramphenicol and nitrofurantoin. Chloramphenicol was 66.7 per cent and nitrofurantoin 64.5 per cent effective against all strains tested. They were 20 to 50 per cent more effective than the other drugs.

Table 3 gives the percentage of effectiveness of the various drugs against different groups of organisms. Chloramphenicol and nitrofurantoin were 27 and 25 per cent more effective than the next drug, erythromycin, against *Micrococcus pyogenes*. Chloramphenicol was the most effective drug (96.9 per cent) against *Streptococcus pyogenes*, followed by nitrofurantoin (93.9 per cent). Nitrofurantoin was the most effective drug against *Proteus sp.*, with chloramphenicol ranking next in effectiveness. Penicillin and erythromycin had no effect on the strains of *Proteus* or *Escherichia coli* in this study. Chloramphenicol and nitrofurantoin were far more effective against *Esch. coli* than the other drugs. Of the strains of *Pseudomonas aeruginosa*, the most resistant organ-

From the Laboratory Service, Veterans Administration Hospital, Durham, North Carolina.

Table 3
The Effect of the Various Drugs on the Strains of Bacteria Tested

Organism	Chloramphenicol		Dihydrostreptomycin		Erythromycin		Nitrofurantoin		Oxytetracycline		Penicillin		Tetracycline HCl	
	1*	2†	1	2	1	2	1	2	1	2	1	2	1	2
<i>Micrococcus py.</i>	58	93.5	24	38.7	41	66.1	57	91.9	31	50.0	17	27.4	29	46.7
<i>Streptococcus py.</i>	32	96.9	9	27.2	21	63.6	31	93.9	28	84.8	13	39.3	24	72.6
<i>Escherichia coli</i>	33	66.0	14	28.0	0	0	30	60.0	19	38.0	0	0	11	22.0
<i>Pseudomonas aeru.</i>	12	26.6	3	6.6	1	2.2	6	13.3	15	33.3	0	0	5	11.1
<i>Aerobacter aero.</i>	20	71.4	4	14.2	1	3.5	23	82.1	9	32.1	1	3.5	4	14.2
<i>Proteus sp.</i>	15	55.5	7	25.9	0	0	18	66.6	1	3.7	0	0	2	7.4
<i>Paracolon sp.</i>	4	25.0	2	12.5	0	0	5	31.2	4	25.0	0	0	3	18.7
<i>Alcaligenes faec.</i>	1	100.0	1	100.0	1	100.0	0	0	1	100.0	0	0	0	0

*Column 1 gives the number of times that the drug was effective against the various strains of that particular organism.

†Column 2 gives the percentage of effectiveness of the drug on total trials for each particular organism.

ism in this study, oxytetracycline was effective against 33.3 per cent, and chloramphenicol against 26.6 per cent. Nitrofurantoin prevented growth in 82.1 per cent of the strains of *Aerobacter aerogenes*, while chloramphenicol was effective against 71.4 per cent. This study revealed that nitrofurantoin, chloramphenicol, and oxytetracycline were the most effective drugs against the very resistant paracolon group. Nitrofurantoin was slightly more inhibitory than the other two. Since only one culture of *Alcaligenes faecalis* was isolated, it was not possible to evaluate the inhibitory action of the various drugs statistically.

Comment

The use of the antibiotic disk for the determination of bacterial sensitivity gives information of great value in the selection of the antibiotic to be administered to the patient, even though the test is not a quantitative one. As Eisenberg and Wagner^(1c) point out, it is not necessary from a clinical point of view that the results of sensitivity tests be quantitative. Broom, Martineau, and Young⁽²⁾ found that the disk method was most useful in the selection of the proper antibiotic to be used and in establishing the prognosis of the patient when resistant bacteria were present. Weil and Harris⁽³⁾

found no instance in which clinical experience was in contradiction to the results of disk sensitivity tests.

Chloramphenicol and Nitrofurantoin

In the present study, chloramphenicol and nitrofurantoin were found to be the most effective drugs, proving 26 and 24 per cent more effective against all organisms than the next drug, oxytetracycline. Chloramphenicol and nitrofurantoin were effective in a considerably higher percentage of instances against the usual gram-positive cocci and gram-negative organisms than was any other drug. This means that chloramphenicol and nitrofurantoin are the drugs that are most likely to be effective in bacterial infections where sensitivity studies cannot be done.

Chloramphenicol was likewise shown to be the most effective drug by a study previously reported by Weil and Harris⁽³⁾. Their data also indicated that chloramphenicol was the drug of choice when sensitivity studies were not available. An argument against its use has been the toxic effect of the drug in producing blood dyscrasias. Lewis and his co-workers⁽⁴⁾, however, found no overwhelming evidence to incriminate chloramphenicol in their recent survey of

539 cases of blood dyscrasias. Chloramphenicol was used alone in only 55 of the 539 cases. One hundred and forty-three patients had received chloramphenicol along with other drugs—namely, antibiotics, analgesics, antipyretics, sulfonamides, arsenicals, and barbiturates—and 341 patients had not received any chloramphenicol. It is conceivable that the 198 patients in whom dyscrasias developed with chloramphenicol alone or in combination with other drugs might well have had these disorders if chloramphenicol had never been administered. Altemeier and his co-workers have used chloramphenicol on the surgical service of the University of Cincinnati during the past four years without the development of a single case of blood dyscrasia⁽⁵⁾.

When one considers the large number of individuals who have received chloramphenicol and the comparatively few who have manifested these dyscrasias, the danger does not seem sufficient to discontinue the use of this most effective antibiotic. Of course, the blood picture of the patient receiving chloramphenicol should be followed very closely. The drug should not be administered repeatedly or for prolonged periods, but it should be given in adequate dosage and discontinued as soon as the fever has been normal for 48 hours.

A factor which may have influenced the relatively high degree of effectiveness of chloramphenicol is its limited use in the past three or four years. This probably has retarded the development of resistant strains of organisms.

Nitrofurantoin is effective only in genitourinary tract infections⁽⁶⁾. The drug's high degree of effectiveness against bacteria responsible for urinary tract infections is brought out by this study. No detectable blood levels are obtained from the usual oral dosage, and the drug must be administered every four to six hours to maintain an effective level of concentration in the urine.

Suggestions for Use

The information from this study gives us a rational approach to the treatment of bacterial infections. Whenever possible one should obtain a culture of the infecting agent and perform sensitivity studies. One can then use the antibiotic that is found to be most effective against that particular

organism. There are times, however, when one cannot obtain sensitivity studies readily and a delay in treatment might prove disastrous. In such circumstances one should obtain material for culture and immediately administer chloramphenicol for a systemic infection or nitrofurantoin for a genitourinary tract infection. If the subsequent sensitivity test indicates a more effective drug than these, the chloramphenicol or nitrofurantoin therapy could be terminated and replaced by the better drug.

Summary

An analysis of the sensitivity of bacteria to various drugs as tested by the disk method in a hospital laboratory has been made. The organisms tested were those most frequently obtained in routine cultures of urine, wounds, blood, abscesses, and sputum. *Pseudomonas aeruginosa* and *Paracolon sp.* were the most resistant groups of organisms. Their percentage of resistant strains was 40 to 37.4 per cent respectively.

The relative effectiveness of the various drugs used was determined, and chloramphenicol and nitrofurantoin were proved to be the most effective drugs in this study. Their use as the drugs of choice when bacterial sensitivity studies are not available was recommended.

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Antibiotics: The desire of the physician to do everything possible and "not to miss a trick" has also led to the persistent use of agents in infections or conditions in which they are known to lack efficacy, such as viral, fungal, or parasitic diseases, and in fevers of undetermined aetiology, when an infectious agent cannot be readily determined or excluded. The fact that most of these patients recover in the course of such therapy seems to be accepted as adequate justification for continuing this practice.—Finland, M.: Clinical Uses of Currently Available Antibiotics, Brit. M.J. 2:1115 (Nov. 21) 1953.

PRURITUS VULVAE

ROY T. PARKER, M.D.

CLAUDIUS P. JONES, M.D.

and

WALTER L. THOMAS, M.D.

DURHAM

Pruritus vulvae is a symptom and not a diagnosis. The word "pruritus" is derived from the Latin *prurire*—to itch. The cause for this distressing symptom is often obscure, difficult to diagnose, and presents a real clinical problem in management. Jeffcoate⁽¹⁾ reports that it is a complaint in 10 per cent of all patients seen in a private gynecologic practice. All practitioners of medicine dealing with women patients encounter this problem sooner or later and frequently in the same patient sooner than later.

The neural mechanisms for the perception of itching are poorly understood. According to Bickford⁽²⁾, Zotterman⁽³⁾, Rothman⁽⁴⁾ and others, itching impulses travel the somatic pain fibers. Itching in this instance would represent a subpain response and would mediate through the lateral spinothalamic tracts. This would explain the known absence of itching in patients who have had a chordotomy for other reasons. It does not explain, however, the central initiation of itching and the desire to scratch observed by all of us when seeing someone else scratching or even when thinking about the subject. The psychiatrists point out that the central mediation of anger, resentment, and eroticism may be exhibited in certain areas of the skin like the vulva. The persistence of this stimulus would lead to scratching, trauma, and visible damage to the tissue, thus setting up a vicious cycle. The individual response and the choice of this location is allied intimately with the patient's intrapsychic problem. This leads to the complexity of the itch-scratch reflex. The process is vague, to say the least, and yet as clinicians we must be impressed with its importance in order to treat substantially any patient presenting a chief complaint of pruritus vulvae.

Etiology

The etiology of pruritus vulvae can be divided into two categories: first, local or genital tract causes; and second, general causes not specific to the vulva. Under genital tract causes are included: (1) trichomonas vulvovaginitis, (2) mycotic vulvovaginitis, (3) nonspecific bacterial vulvovaginitis, (4) senile vulvovaginitis, (5) atrophic and lichenified hypertrophic vulvitis, (6) leukoplakia of the vulva, and (7) carcinoma of the vulva. General causes not specific to the vulva include: (1) diabetes mellitus, with or without associated mycotic infection; (2) drug sensitivity and allergy; (3) chemical irritants; (4) skin diseases—herpes, intertrigo, lichen planus, psoriasis, urticaria, and others; (5) vitamin deficiencies, especially vitamin A and B complex; (6) animal parasites such as pediculosis and scabies; (7) other systemic diseases such as anemia, leukemia, hepatitis, and tuberculosis; and (8) neurogenic dermatitis.

A more practical application of this etiologic classification is to break it down into age groups. The causes of pruritus vulvae according to age groups are divided into the following: I. Premenarchial; II. Menstrual; III. Postclimacteric. The subdivisions of this classification are seen in the following outline:

I Premenarchial

1. Non-specific bacterial vulvovaginitis (uncleanliness)
2. Foreign body in vagina
3. Gonorrheal vaginitis
4. Vaginitis hyperestrinism (normal muco-epithelial)
5. Pinworm (oxyuris vermicularis)
6. Masturbation with vulvovaginitis

II Menstrual

1. Trichomonas vulvovaginitis
2. Mycotic vulvovaginitis
3. Non-specific bacterial vulvovaginitis
4. Diabetic vulvovaginitis
5. Chemical irritants or allergic vulvitis
6. Neurogenic dermatitis of vulva
7. Carcinoma of vulva
8. Skin diseases—herpes, intertrigo, lichen planus, psoriasis, etc.
9. Animal parasites—pediculosis and scabies
10. Other systemic diseases—vitamin deficiencies, anemia, leukemia, etc.

III Postclimacteric

1. Senile vulvovaginitis
2. Atrophic and lichenified hypertrophic vulvitis
3. Leukoplakia of vulva
4. Carcinoma of vulva
5. Diabetes mellitus
6. Vitamin deficiencies, A B complex
7. Drug sensitivity and allergy

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From the Department of Obstetrics and Gynecology, Duke University School of Medicine, Duke Hospital, Durham, North Carolina.

8. Other generalized skin diseases
9. Other generalized systemic diseases
10. Neurodermatitis

Diagnosis

In the diagnosis of pruritus vulvae the patient in these separate age groups must be subjected to a meticulous history, careful examination, and selected laboratory studies.

History

In eliciting the history it must be determined if pruritus is the chief symptom or if the patient is bothered more by burning, pain, swelling, or other frequent concomitants. The site of the itching is important, as the patient commonly refers to the "privates" as the area that extends from the mons veneris to beyond the anus. Itching in the region of the mons veneris may be due to a generalized dermatitis or to parasitic diseases such as scabies and pediculosis, whereas itching in the labia minora is rarely due to these causes. The duration of the pruritus is significant, particularly in chronic diseases, such as leukoplakia and neurodermatitis. The presence of leukorrhea, its type, quantity, color, and relation to menses, is especially helpful in the trichomonad and mycotic infections. Pruritus associated with a bleeding lesion of the vulvae is tantamount to carcinoma until proven otherwise.

A careful allergic or dermatologic history may in itself be diagnostic. The important features of the history are, then, the intensity of the pruritus, the site, duration, relationship to menses, associated leukorrhea, bleeding, and finally, allergic or dermatologic history.

Examination

The examination should include a careful survey for skin lesions elsewhere. The presence of inguinal adenopathy and its relationship to infection and carcinoma is obvious because of the rich direct lymphatic communications between the vulva and the inguinal and regional pelvic lymph nodes. In examining the local lesion, the physician is interested primarily in the type and character of the lesion, whether it appears to be an acute or chronic infection, in a new growth, in the presence of trauma or scratch marks, and in the presence of fissuring or ulceration. The examiner must search care-

fully for associated signs of infection or neoplasia around the anus, Bartholin's glands, urethra, vagina, and cervix.

We have seen a patient in our clinic recently with intractable pruritus vulvae as the chief complaint. There were multiple discrete, maculo-papular bluish lesions of the vulva and crural regions which did not appear diagnostic of any disease of the vulva or genital tract. On rectal examination an indurated cauliflower lesion was noted very near the anus. A histologic examination revealed this vulvar process to be an extensive cutaneous lymphatic spread of adenocarcinoma from the anal region.

Laboratory tests

Selected laboratory tests are mandatory in establishing the diagnosis of some vulvar diseases. A complete blood count is desirable, with special reference to blood dyscrasias or anemia, which may be a primary or contributing factor in pruritus. A complete urinalysis is necessary with reference to diabetic vulvovaginitis. Hanging drop preparations of fresh vaginal secretions in saline and immediate examination under the microscope require only a few minutes and are diagnostic for trichomoniasis and mycotic vulvovaginitis for practical purposes. Vulvovaginal cultures are valuable adjuncts in diagnosis of nonspecific bacterial infections, yeast, and mixed infections. Exfoliative genital cytologic studies (Papanicolaou) of the vulva, vagina, and cervix have been very helpful in the initial examination and follow-up of senile vaginitis, atrophic and hypertrophic lichenified vulvitis, leukoplakia, and carcinoma of the vulva⁽⁵⁾. Biopsy of the vulva and careful microscopic examination are mandatory in all raised, whitish, indurated, or ulcerated lesions. Blood chemistry studies, with special reference to blood sugar, glucose tolerance, nonprotein nitrogen and vitamin A determination, are important in detecting the less obvious underlying causes. Venereal disease studies must not be overlooked if there is any question of syphilis, granuloma inguinale, lymphopathia venereum, and the other hypertrophic ulcerative lesions of the vulva.

These significant features of the history, examination and laboratory are now applied to some of the more common causes of pruritus vulvae in the respective age group etiologic classification.

Premenarchial Age Group

Vulvovaginitis

Gonorrheal vulvovaginitis: Schauffler⁽⁶⁾ states that it is difficult to determine the source of vaginal infection in immature females, although there is no doubt that the most frequent source is cross-infection from other little girls, as exemplified in institutional "epidemics," or from infected attendants or parents. The symptoms are usually acute and described by the child or parent as discharge, irritation, pruritus, and dysuria. The clinical findings are a rather intense vulvovaginitis, with purulent discharge, tenderness, and pain on examination. The diagnosis is suspected by smear from the vagina and urethra, and confirmed by cultures.

As a word of caution, it should be mentioned that other gram-negative organisms as *Neisseria catarrhalis* or anaerobic *Neisseriae* are frequently confused and the child and family are incorrectly stigmatized with the diagnosis, gonorrheal vulvovaginitis. The treatment of choice is penicillin therapy and local cleansing of the vulvovaginal region with warm Sitz baths. Schauffler⁽⁶⁾ warns that medico-legal aspects are concerned in the diagnosis of gonorrheal vulvovaginitis in infants and little girls. In court, culture diagnosis is accepted as the only satisfactory evidence. The routine use of culture diagnosis has therefore become imperative.

In the *nonspecific bacterial vulvovaginitis* the same diagnostic routine must be instituted as for gonorrheal vulvovaginitis. The diagnosis of a nonspecific infection is made only by exclusion. The organisms are predominantly of the nonsporulating anaerobic group. The treatment is primarily cleanliness, defocusing of attention, and reassurance of the parents. Intravaginal antibiotic and estrogenic therapy have been used with varying degrees of success.

Foreign body

The presence of a foreign body in the vagina of a child is mistaken frequently for a primary vaginal infection, and the diagnosis is delayed. The incidence is given usually as less than 1 per cent of all children treated for vulvovaginitis. Nevertheless, the possibility should not be overlooked, as, in our experience, the incidence is higher than 1 per cent and there will be no measure of a

cure until the foreign body is removed. The history and findings are itching, irritation, and frequently the presence of a blood-tinged vaginal discharge. A history of suspected masturbation is helpful, as the insertion of foreign bodies often occurs in this manner. The child becomes uncooperative after being traumatized by repeated examinations by one doctor and another before the diagnosis is finally established.

The diagnosis can be made easily by a combined rectovaginal examination with a probe in the vagina. If the foreign body is metallic, the metallic tinkle of the probe coming in contact with the object is easily discernible. AP and lateral roentgenograms for the detection of radioopaque objects must be done. Vaginoscopic examination with an otoscope, or more successfully with a Kelly cystoscope, can be done easily and usually provides the only conclusive proof that a foreign body is or is not present. The treatment consists of removing the foreign body, taking care to protect the vagina and rectum, as not infrequently the object will be sharp, such as an opened safety pin or hair pin. If the child has been badly traumatized previously, as is usually the case, anesthesia for the vaginoscopic and removal of the foreign body is not only desirable but imperative.

Vaginitis

Vaginitis due to hyperestrinism is not an unusual finding in prepubescent children. The symptoms are minimal, and may consist of nothing more than slight itching, irritation and discharge of a clear or yellowish material on the clothes. The parents are nearly always more impressed than the child. Examination will disclose evidence of prepubescent somatic and sexual growth. The discharge is a muco-epithelial serum, with normally desquamated vaginal cells. Bacteria and pus cells are scarce. Again, specific infection and foreign body must be ruled out. The treatment is directed primarily towards reassuring the parents that this finding is normal, thereby mediating a more healthy attitude in the child. Cleanliness for the prevention of secondary infection is advised.

Menstrual Age Group

The most common causes of pruritus vulvae during the childbearing age are: tricho-

moniasis vulvovaginitis, mycotic vulvovaginitis, nonspecific bacterial vulvovaginitis, diabetic vulvovaginitis, and neurogenic dermatitis.

Trichomonas vulvovaginitis

Trichomoniasis is the foremost cause of pruritus vulvae in the childbearing age group. In a study of 254 patients who presented with symptoms of itching of the vulva, Jeffcoate⁽¹⁾ found trichomoniasis to be the cause in 100 patients. Various authors have reported the presence of trichomonad protozoa in the vagina of approximately 25 per cent of all obstetric and gynecologic patients examined.

The chief symptom is increased vaginal discharge with associated irritation, burning on urination, pruritus, dyspareunia, and soreness. The symptoms are accentuated around the menses, owing to the alkalinity of the menstrual blood and an increased number of organisms. The itching and irritation is usually limited to the labia, clitoris, and vestibule. Examination reveals a thin, frothy or bubbly, greenish-yellow discharge with very little mucus. There is hyperemia and frequently edema of the vulva, vagina, and cervix. The posterior vaginal fornix often shows granular hemorrhagic stippling, strawberry-like in appearance, which is almost pathognomonic for trichomoniasis.

The diagnosis is easily established by the hanging drop or fresh preparation technique. A few drops of the discharge from the vaginal pool are mixed with a small amount of saline, and placed on a clean slide, and examined immediately for the presence of motile protozoa. The vaginal smear is Type II or III, with no Döderlein's bacillus present. The pH is high. Culture for bacteria or trichomonads may be helpful. The bacteria present are usually nonsporulating anaerobes. If a positive diagnosis cannot be established because of recent douches or previous examinations, treatment should be deferred and the patient re-examined when the symptoms are intensified.

No form of treatment of trichomoniasis is completely effective in all patients, but many methods may be employed to give good immediate results. The most effective method in our clinic has been the use of acid douches, employing a solution of 12 to 60 cc. of U.S.P. lactic acid to 2,000 cc. of warm

water. This douche should be used twice daily, continued through the menstrual period under low pressure, and gradually diminished as the symptoms subside. Other methods of lowering the pH, such as acid jellies, and beta-lactose powder or vaginal suppositories, may be equally effective. Specific chemical therapy will also give good results. The same can be said for antibiotic vaginal tablets. All these methods will rid the vagina of trichomonads temporarily, but the infection will recur almost invariably unless the acidity of the vagina is restored and a healthy growth of the bacillus of Döderlein is established. The clearing up of secondary cervical infection is helpful. Any form of therapy must be maintained through the menstrual period in order to be effective.

Mycotic vulvovaginitis

Mycotic vulvovaginitis is the second most common cause of pruritus vulvae during the childbearing age and the most common cause during pregnancy. Carter and Jones⁽⁷⁾ obtained positive cultures for yeastlike fungi in 14 per cent of 100 gynecologic patients and 32 per cent of 114 pregnant patients. Symptoms do not occur necessarily in this same frequency. The fungi of the genus *Candida* are the only symptom-producers, for all practical purposes⁽⁸⁾. The primary symptom of mycotic vulvovaginitis is itching of the vulva. There is associated irritation, increased discharge, dysuria, edema of the vulva, and painful intercourse. In contrast to trichomoniasis, the symptoms are partially relieved during the menses.

The clinical findings vary from an essentially normal appearance to that of a cheesy flaky, white vaginal discharge, with intense hyperemia and edema of the vulva and the vaginal walls. The vaginitis is usually granular in type, and the irritation of the vulva may be extreme to the point of ulceration. The diagnosis can be obtained in the clinically obvious patients by direct microscopic examination of the vaginal discharge. Some of the flakes of the cheesy material are collected on a cotton swab, macerated on a glass slide, and floated in normal saline. The long thread-like segmented fibers or mycelia are easily recognized. For confirmation in the obvious patient and for diagnosis in the less obvious, the yeast may be cultured on Sabouraud's medium at room

temperature. Gentian violet, silver picrate, iodine and many other such preparations have been employed in treatment. The most simple and most effective treatment, in our experience, has been calcium and sodium propionate vaginal jelly (Wyeth:Propion Gel). The vagina is carefully cleansed with a copious douche of plain warm water before treatment is started. Warm sitz baths are helpful in relieving the acute vulvitis. The patient is told to insert one applicator of the jelly twice each day until two full tubes have been used. Douches are discontinued during Propion Gel therapy and perineal pads are to be avoided. At the end of one course of therapy (two tubes), cultures are repeated and a second course given if indicated. In the pregnant patient, a cure is rarely effected and Propion Gel is used for symptomatic relief as necessary even in the last trimester. The meticulous details for Propion Gel therapy must be followed for effective results.

Diabetic vulvovaginitis

Diabetic vulvovaginitis is usually of mycotic origin and the diagnosis and treatment are the same as for mycotic vulvovaginitis. Unregulated diabetes is commonly complicated by severe vulvovaginitis, as the yeast organism thrives in a free supply of carbohydrates. In the non-mycotic variety, the symptoms are severe pruritus and irritation. Diabetes is not infrequently diagnosed secondary to the pruritus vulvae for which the patient consulted the physician. On examination the vulva is found to be edematous, a glistening purple-white in color, and often has an associated intertrigo. The diagnosis is established by the presence of glycosuria and an elevated fasting or postprandial blood sugar. If there is any doubt, a glucose tolerance test should be done. Fungus cultures are taken.

The treatment, as in the mycotic variety, consists of better control of the diabetes, vitamin supplement (A and B complex), a regimen directed toward a clean and dry vulva, and avoidance of chemical and local irritants.

Neurogenic vulvovaginitis

Neurogenic dermatitis of the vulvae is one of the most distressing and intractable causes of pruritus vulvae. As previously noted, all prolonged itching of the vulva is

complicated by the psychic component of the itch-scratch reflex. Neurodermatitis of the vulva, on the other hand, is a fairly definite disease entity. Frequently it is not difficult to recognize, but should not be hastily diagnosed. The symptoms are severe itching, usually of long duration and often specifically localized. Primary infection, discharge, and other local causes are usually no longer discernible as such. Associated psychogenic disturbances such as marital maladjustment, worry over venereal disease, cancer-phobia, masturbation, and the desire to avoid coitus can be brought out by close questioning. The response to all forms of therapy is commonly short-lived. Notoriously, the patient gives a history of going from one doctor to another.

Neurodermatitis of the vulva may be present in any age group but is more prevalent during the childbearing period. The lesions are either labium majus or the periclitatorial regions. Associated scratch marks are usually seen. The diagnosis is made by the characteristic appearance and location of the lesion, by other psychoneurotic personality traits, and by careful ruling out of all other causes. Hospitalization should be a part of the initial treatment of the patient. Diligent studies for diagnosis and reassurance should be instituted. Local symptomatic measures are helpful. Prolonged psychotherapy is the only effective management.

Postclimacteric Age Group

Senile vulvovaginitis

Senile vulvovaginitis is one of the most common and yet least distressing causes of itching in postmenopausal women. Itching and irritation are minimal. Dyspareunia is of the dry type. There is no leukorrhea.

The clinical findings are those of atrophy of the vulva and vaginal mucous membranes. There are frequent submucosal hemorrhagic areas that vary in color from red to muddy brown. Fissuring associated with trauma of coitus or scratching is not uncommon. The diagnosis is established by the absence of specific infection, absence of hypertrophic or leukoplakic areas, and by the helpful adjunct of Papanicolaou genital cytologic smears. Treatment by estrogenic vaginal cream applied nightly intravaginally for

two or three weeks and followed by twice weekly applications is usually sufficient. The same estrogenic vaginal cream serves as a helpful and satisfactory sexual lubricant to combat the "dryness." Plain water or slightly acid douches may be beneficial. The problem is primarily that of local estrogenic deficiency and can be relieved satisfactorily by local estrogenic therapy. Oral and intramuscular estrogens are not necessary, and are to be condemned, as they may lead to postmenopausal estrogenic withdrawal bleeding, whereas the local cream will not produce this complication.

Atrophic and hypertrophic vulvitis

This type of vulvitis usually occurs in the postclimacteric patient and is rarely seen during the menstrual age. Kraurosis or shrinkage takes place as a result of estrogen deprivation. Any trauma such as persistent moisture from stress urinary incontinence, prolapsus uteri, coital abrasion, uncleanness from fecal contamination and, most important of all, scratching may lead to local hyperkeratosis and lichenification. The chief symptom is severe pruritus, which is not infrequently peri-anal as well as vulvar. Irritation and "burning" occur with scratching. There may be slight bleeding, but only with trauma. Dyspareunia is of the dryness and contraction type. Leukorrhea is minimal unless there is associated secondary infection. The local findings are those of atrophy and shrinkage in some areas with hypertrophy, induration and lichenification in other areas. Fissuring and ulceration are common. The process may extend into the perineal and peri-anal regions. The whitish discoloration of the lichenification is frequently confused with leukoplakia.

The diagnostic differentiation from leukoplakic vulvitis is made by Papanicolaou genital cytologic studies and biopsy in multiple local sites. The diagnosis is further confirmed by response to treatment, as this process is reversible. The treatment consists of local symptomatic measures, drying regimen and in some patients estrogenic vaginal cream. Vitamin A has been used with variable success. The most important single feature in treatment is the general care and protection rendered to this "crippled" vulvar tissue and in turn the breaking of the itch-scratch reflex. The details of this type

of management are covered under general measures in treatment.

Leukoplakic vulvitis

Leukoplakic vulvitis is similar to atrophic and hypertrophic lichenified vulvitis in its appearance and location. Miller⁽⁹⁾ has aptly stated that the etiology of this troublesome lesion is unknown, its clinical course obscure, the histologic picture controversial, and a satisfactory treatment wanting. There is great confusion among writers on this subject as to what this disease entity should be called. Taussig⁽¹⁰⁾, following the concept of a similar lesion in the mouth described by Schwimmer in 1877, adopted the term leukoplakia and described a hypertrophic and atrophic stage of the disease. The hypertrophic stage is characterized by an overgrowth and keratinization of the epithelial layer, hypertrophy of the papillae, and chronic inflammation and edema of the connective tissue, with almost complete absence of elastic tissue in the subepithelial layer. In the atrophic stage the epithelial layer is thin, though keratinization may still be pronounced, and there is a pale collagenous layer beneath the epithelium (Novak)⁽¹¹⁾. Despite the existing confusion concerning the clinical and histologic picture of leukoplakia, there is general agreement regarding its definite predisposition to carcinoma of the vulva. In the reported patients with carcinoma of the vulva, more than 50 per cent of the malignancies have been preceded by leukoplakia of the vulva.

Leukoplakia of the vulva is most commonly found in the postmenopausal age group, is not infrequently seen in the child bearing age, and has been described in pregnancy. The symptoms are those of obstinate pruritus, irritation, edema, and bleeding on trauma. The skin is thin, atrophic, tense, and reddish-white in color in some regions and indurated, with thickened hypertrophic whitish plaques, in other areas. Fissuring and ulceration are common. The process may be localized in the labia minora or clitoridal region, but is frequently extensive involving the peri-anal tissues. The diagnosis is established by Papanicolaou genital cytologic studies and biopsy in multiple sites. All raised, whitish, indurated or ulcerated lesions should be biopsied and carefully

studied in multiple cross-sections for invasive carcinoma.

Leukoplakia is resistant to treatment and is considered by some as an irreversible process. The treatment is varied and largely empirical. Our best results have been obtained with the general measures listed below. Hyams⁽¹²⁾ reported enthusiastic results with vitamin A therapy in 1947. Time and trial have discredited the effectiveness of this treatment in every patient. Estrogenic vaginal cream is helpful in some patients. Alcohol injected, as fostered by Wilson⁽¹³⁾, has not only proved to be unsatisfactory but is dangerous because of the local slough that may occur. Anesthetic ointments and antihistaminic preparations give only temporary relief and should not be used for prolonged periods because of the likelihood of sensitization. As a temporary expedient Quotane (Smith, Kline and French) and Tronothane lotion (Abbott) have proved most beneficial, and are less likely to sensitize the patient. Because of the definite predisposition of leukoplakia to carcinoma of the vulva, simple vulvectomy is advocated by many authorities. The incidence of recurrence of leukoplakia in the transplanted skin varies from 25 to 50 per cent in most reported series. For this reason and because of the frequent scarring and distortion that follow, vulvectomy is not justifiable in all patients. We resort to simple vulvectomy in selected patients who have proved unresponsive to all other forms of therapy and show a progression of the disease process, and in some patients where Papanicolaou cancer smears or multiple biopsies have indicated the need for extensive microscopic study of the remaining vulvar tissue.

In general, the treatment of leukoplakic vulvitis is unsatisfactory. Malignancy must be ruled out. The patient must be followed carefully at six-month intervals or more often if ulceration and fissuring occur. If the patients are taught to adhere strictly to the general measures for care of the vulva, they will usually improve and develop a surprising tolerance.

Carcinoma of the vulva

A discussion of carcinoma of the vulva is not within the scope of this presentation, and yet it is important as the fourth most common form of genital tract malignancy.

Its insidious onset must be emphasized. The symptoms are usually the same as those of leukoplakic vulvitis and will be described by the patient as burning, itching, and the development of a "slow-growing sore on the privates." Bleeding from a vulvar lesion is tantamount to cancer until proven otherwise. The early lesions are inconspicuous in their appearance and all indurated, ulcerated nodules should be biopsied immediately. The labia minora, clitoris, and vestibule are the most common sites.

Bartholin gland carcinoma is rare but should be kept in mind. Inguinal adenopathy is frequent but never precludes therapy. The diagnosis is established by Papanicolaou genital smears and biopsy, with careful microscopic study. The treatment is radical vulvectomy and bilateral radical groin dissection with extraperitoneal pelvic lymphadenectomy.

Precautions and General Measures In Treatment

Precautions in the treatment of pruritus vulvae and a plan for general measures in treatment are outlined as follows:

Precautions

1. Do not treat specifically without a proved diagnosis.
2. Watch for chemical irritants and allergic dermatitis—soaps, disinfectants, medications such as gentian violet and some clothing.
3. Avoid ointments with oily base.
4. Avoid prolonged use of topical anesthetic, antihistamine and antibiotic preparations (sensitization).
5. Alcohol injections are temporary and dangerous.
6. **Never use x-ray therapy** for any disease of the vulva.
7. Biopsy—all raised, whitish, indurated or ulcerative lesions.

General Measures

1. **Local symptomatic therapy**
 - a. Starch water sitz baths for itching and burning
 - b. Plain water douches
 - c. Quotane Lotion (S.K.F.)
Tronothane Lotion (Abbott)
2. **For secondary infection**
 - a. Potassium permanganate sitz baths, 1:4000
 - b. Saline compresses
 - c. One half per cent acetic acid for Pyocyanus
3. **Drying regimen (after toilet and bath)**
 - a. Do not rub with towel; pat dry with soft tissue
 - b. Hair dryer in bathroom
 - c. Perineal heat lamp
 - d. Loose-fitting, clean, dry clothes at all times
4. **Improve general health**—malnutrition, vitamin deficiencies, anemia, and so forth
5. **Sedation**

- a. Important at night during early therapy
- b. Antihistamines—frequently used as mild sedation and antipruritic

6. Psychotherapy

- a. Reassurance regarding cancer, venereal disease, and sex life
- b. Hospitalization or frequent office visits in initial treatment phase
- c. Break scratch habit

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Diabetes can be very disabling. Slow healing of wounds is an example. Amputation of a lower extremity because of gangrene is another. The susceptibility to coronary artery disease is another. All of these conditions have been repeatedly stressed by the Association of American Railroads. It is essential, however, that these disabling conditions be seen in their proper perspective. Girls do not hesitate to marry because of the tragic deaths in child-birth. They know that these deaths are the exceptions to the rule. One does not hesitate to travel by train because of the many deaths from train collisions, even though they have been the result of gross negligence. Travel by air is not discouraged because of the many deaths from aeroplane accidents. These deaths are seen in terms of the total number of people who travel by train and by air and the total number of miles so travelled. Similarly common sense and justice to diabetics demand that industries properly evaluate the risk of their employment.—Rabinowitch, J. M.: The Diabetic in Industry, Canad. M. A. J. 67:35 (July) 1952.

The death rate for acute appendicitis in the United States in 1952 was 1.7 per 100,000 population, which seems, and is, quite low. But when this rate is translated into actual numbers, we find that it means that last year, 2,600 persons died of "this eminently treatable condition." That is roughly 217 deaths a month, well over twice the number in England and Wales, from a disease which was described definitively 67 years ago and the treatment of which was spelled out with equal clarity at the same time.—Boyce, F. F.: The Role of Atypical Disease in the Continuing Mortality of Acute Appendicitis, Ann. Int. Med. 40:670 (April) 1954.

POST-CHOLECYSTECTOMY

A Clinical Syndrome

E. L. MARSTON, M.D.

WINSTON-SALEM

The sequela of cholecystectomy may be many; our duty as surgeons is to reduce these to a bare minimum. This paper calls attention to a complication that can be easily prevented by a simple technical maneuver.

This complication is traumatic perichondritis, secondary to the proximity of a stab wound drain. Its cure is to place the drain at a greater distance from the costal margin. The diagnosis is established by clinical and not by microscopic methods.

Pain from a post-cholecystectomy drain can be initiated or aggravated by traumatic (and rarely chemical) perichondritis subsequent to (1) nearness of the stab wound to the costal cage; and (2) actual contact between the costal cage and the stab wound and contents. The pain is constant, gnawing and localized, and is sometimes increased by breathing, coughing, hiccupping, and straining. Patients guard this area with remarkable care. Point tenderness is present over the involved costal cartilage without signs of inflammation. Local edema and induration are minimal.

The pain persists but is lessened by removing the drain and stopping the flow of bile through the wound. The site may remain tender, however, for 6 to 12 months, rarely longer.

The only treatment is local heat, aspirin, and removal of the drain tube at the proper postoperative interval. Local infiltration of 1 per cent Novocain provides temporary relief. Neurectomy is too radical a procedure for this condition.

Correlation of pulmonary atelectasis with this complication postoperatively has not been investigated, but it must surely be another significant factor.

Prevention

Most stab wounds are created by the application of traction to the peri-incisional abdominal skin; with release of tension the wound will ride higher than anticipated. The constant motion of the chest in proximity to such a wound produces tenderness;

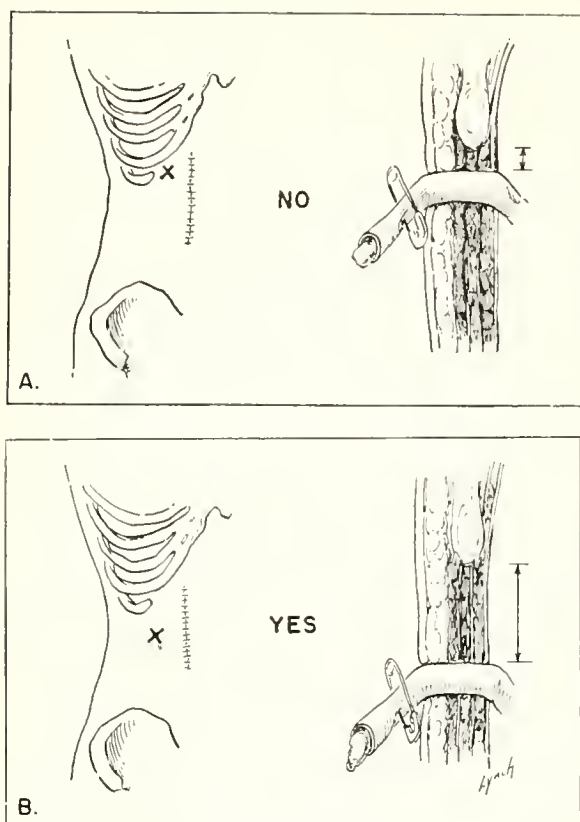


Figure 1

actual chondral trauma with instruments accentuates this condition. (The same warning applies to subcostal incisions and to prolonged and strenuous subcostal retraction). Locating the stab wound at a safe distance below the ribs (see figs. 1A and B) will prevent the condition from occurring.

Hemiplegia—It is estimated that there are more than a million individuals with hemiplegia in the United States, and the internist usually has been the first line of defense in their management. In the past, the attitude generally has been one of passive acceptance. Sedation, potassium iodide and psychotherapy, usually without too much conviction, have been the bases for management. With a dynamic approach to the problems of hemiplegic patients to exclude those cases in which the rehabilitation cannot keep up with the pathologic processes, as seen in the patient with malignant hypertension, or encephalomalacia, or advanced senility, rehabilitation may safely be started with patients with moderate to severe hypertension if they are closely supervised and have adequate rest periods. It has been found that most patients will have a drop in pressure under a carefully regulated regime of mild activity and training. This is probably the result of the axiom that "action absorbs anxiety."—Rusk, H. A.: *Chronic Disease in an Aging Population*, Ann. Int. Med. 33:1341 (Dec.) 1950.

THE HEALTH INSURANCE DILEMMA IN NORTH CAROLINA

O. NORRIS SMITH, M.D.*

GREENSBORO

In an effort to stimulate the interest of doctors in Health Insurance in North Carolina, the following discussion represents ideas drawn from authoritative sources, rather than a personal dissertation on the subject. It is published at the request of the Physicians Advisory Committee on the Blue Shield Plan.

Insurance Principles

The basic function of insurance is risk-sharing, and several essential principles have been defined by Miller⁽¹⁾:

1. The event insured against must be of infrequent occurrence; the family budget could more economically meet any regular or anticipated expense without paying additional administrative costs.
2. The loss insured against should be of financial consequence; small insurance claims greatly increase administrative costs.
3. The loss indemnified must be measurable, or the benefits provided must be specific.
4. The event insured against must be definable and subject to verification.
5. The event insured against should be beyond the control of the insured; insurance must not appreciably increase the occurrence of the event insured against, nor the magnitude of the resulting loss. If payment of the insurance benefit places the insured in a better position than he enjoyed prior to the contingency insured against, then over-insurance exists, to the detriment of the plan's stability.

As we shall see, health insurance is apt to violate this last principle, both through multiple coverage and through the moral hazard of utilizing as many free benefits as possible. Misuse of surgical benefits is somewhat curtailed by the discomfort and risk of surgery, but free hospitalization for minor nonsurgical illness is very attractive to many people who otherwise would have to be cared for at home at considerable inconvenience to the family and the patient.

*Chairman of the Physicians Advisory Committee on the Blue Shield Plan, 1952-1955.

Pregnancy is not an unpredictable "hazard" that merits legitimate insurance, but in response to public demand, many insurance plans have partially socialized maternity care at the expense of all family subscribers. X-ray examinations entail no deterring discomfort or risk, are profitable to most hospitals, are of academic and professional interest to the physician, and add an element of glamor to the patient's recital of his illness; free in-hospital roentgenograms are not actuarially sound, and we all know they invite tremendous abuse. Almost all health insurance excludes benefits for consultations, diagnostic admissions, rest cures, cosmetic surgery and private nursing; as would be the case with free sick-room flowers, there would be no deterrent to wholesale wastefulness.

Hospital insurance has provided needed hospital care for thousands of patients who otherwise might have had to forego necessary attention, but it has also resulted in tremendous amounts of unnecessary hospitalization and wasted ancillary services. Every day that a patient occupies a hospital bed unnecessarily in order to obtain health insurance benefits, the waste becomes a charge against all subscribers and increases the overall cost of hospital operation. A careful study of 12,000 hospitalized patients in one state showed that 28 per cent of all hospital admissions contained some element of faulty use, more frequently among "insured" patients. Nearly one out of five days used by Blue Cross patients was not necessary to the recovery, safety, or reasonable comfort of the patient. As more general hospital beds have been built, there is less deterrence to the overuse of hospital facilities. *The more the misuse, the higher the rate*; this is presently pricing hospital insurance out of reach of the lower income families.

Insurance does not reduce the cost of medical care; it simply spreads the cost of illness over a larger group. Persons with health insurance spend more for health services than those without such insurance, partly because a regular prepayment in the budget towards health services indicates a higher regard of its importance, partly because prepayment protection increases with ability to buy, partly because financial barriers are minimized when the occasion

arises, and partly because of human nature—the average person likes to "get something out of his insurance," and this moral hazard is of tremendous importance in health insurance rates.

Unfortunately for health insurance programs, people with such insurance spend more for health services than those without: the hospital admission rate is 30 per cent greater, the annual hospital bed occupancy per 1,000 persons is almost 40 per cent greater, and the number of surgical procedures is 75 per cent greater. The disproportion is least in the higher income families (over \$7,500 a year), and maximal in the rural farm and lower income family groups. The data upon which these statements are based are given in table 1⁽²⁾, and merit careful study by every doctor.

As benefits become more comprehensive and approach full re-imbursement, there appears a disproportionate increase in admission rate, days of hospitalization, and amount of ancillary services. Table 2 tabulates the hospital usage by participants of Hospital Saving Association's three popular Blue Cross certificates with our own Doctors' Plan ("E") when its only co-insurance protection was 50 per cent of x-ray charges. The 5K certificate on the average paid 67 per cent of the hospital bill, while the 6G and 10G certificates paid 89 and 92 per cent respectively; a high proportion in each category also involved benefits for surgical indemnity, but only the "E" plan provided professional benefits for nonoperative medical care. The favorable obstetric experience will rapidly rise, as the 10-month exclusion was still in effect during this second year of the Doctors' Plan Program. Table 3 illustrates the increased hospital occupancy by patients with medical illnesses when "free" professional service was added to hospital insurance benefits.

"Complete coverage violates the insurance principles and is insupportably expensive. With no limit on the amount of free medical service in the contract, members tend inevitably to make excessive demands on physicians and hospitals, calling for kinds and amounts of service which cannot be paid if the plans are to keep their costs at a reasonable level. Complete coverage is the very feature of government-controlled medi-

Table 1
Impact of Health Insurance on Hospital Usage⁽²⁾

1953 Family Survey of Medical Costs	General Hospital Admission Rate			Hospital Days Per Year			Surgical Procedures		
	All Families	Insured	Not Insured	All Families	Insured	Not Insured	All Families	Insured	Not Insured
Per 100 Persons	12	13	10	100	110	80	6	7	4
By income groups:									
Below \$1,999	12	19	9	110	120	100	5	9	4
\$2,000-\$3,499	12	14	10	90	120	60	6	8	4
\$3,500-\$4,999	11	12	10	110	120	70	6	7	4
\$5,000-\$7,499	11	13	8	90	100	80	7	8	5
Above \$7,500	12	11	12	90	90	90	7	8	4
By residence									
Urban families	11	12	9						
Rural non-farm	13	14	11						
Rural farm	12	17	9						

Table 2
Impact of Increasing Benefits on Usage
Hospital Days Per Year Per 1000 Participants

	"Good"	"Better"	"Better"	ALL	"Best"	E % of all
	5K	6G	10G	HSA	E	HSA
Obstetric.....	120	126	134	129	118	91%
Surgical.....	340	360	400	363	489	135%
Medical.....	390	450	550	456	799	175%
	850	936	1084	948	1406	148%

cine that tends to plunge it into bankruptcy.”⁽³⁾ It is the major expense of a serious illness or accident that is most likely to upset the family budget and against which sound health insurance should be first directed. The sociologist wants the financial burden of sickness to be borne entirely by the healthy, including home visits, office visits, annual health examinations and preventive measures, and labor union leaders enthusiastically pursue this goal for their members. It is not a legitimate use of “insurance” to offer any routine service to all subscribers; the annual premium must be increased to pay not only for the service, but also for the added cost of processing the claim.

Figures 1 and 2 portray hospitalization experience according to age and sex. The admission rate for children is high, but the average duration is brief. During adult productive life, the differences between the sexes is largely due to obstetrics and gynecology; the company which excludes “con-

Table 3
Impact of Adding Medical Benefits
Hospital Days Per Year Per 1000 Participants

	Doctors’ Plan	All HSA Inpatients
Respiratory	162	87
Digestive and Genitourinary	150	133
Circulatory	128	91
Other medical	244	145
	684	456

ditions not common to both sexes” avoids much expense, and could offer such health insurance to either sex at about the same cost. Commercial insurance companies have a basic philosophy of trying to classify risks to the end of having each class of risks pay for its own insurance but not for the insurance of the other classes; hence the group with 90 per cent male employees gets a much better rate than the group with 90 per cent women employees. The original Blue Cross concept was to charge everyone the

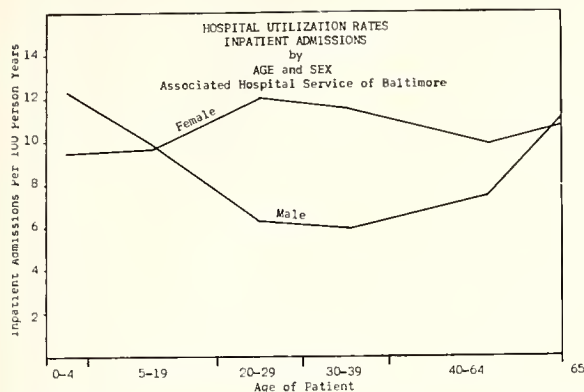


Fig. 1. Hospital admissions per 100 persons per year.

same rate regardless of age or sex; rather than continue to lose the best groups of male workers to commercial companies, many Blue Cross plans have modified their dues in accordance with the ratio of male and female employees in the group.

The rapidly increasing proportion of our population more than 65 years of age presents a major problem in underwriting health insurance, especially for Blue Cross-Blue Shield. Older people do not have more sickness than younger adults, but the average duration is much longer, and at the same time the patients are less able to finance hospital care except through insurance. "Considering all the evidence at hand, it seems reasonable to assume that the amount of hospitalization per capita of the age group 65 years and older is roughly four times that of the younger age group, while physicians' services may be approximately doubled. Thus in 1952, 8.3 per cent of the population would require 26.5 per cent of the hospital facilities and 15 per cent of physicians' services."⁽¹⁾

Blue Cross and Blue Shield developed their programs by charging the same rate at all ages and continuing protection for those members enrolled prior to their sixty-fifth birthday. Such a rate was higher than necessary for the younger age groups during their productive years, and less than adequate for the older age group, leaving a very attractive field for competition from commercial companies among the employed groups. As time goes on Blue Cross and Blue Shield will attract an increasing proportion of older people as they are dropped

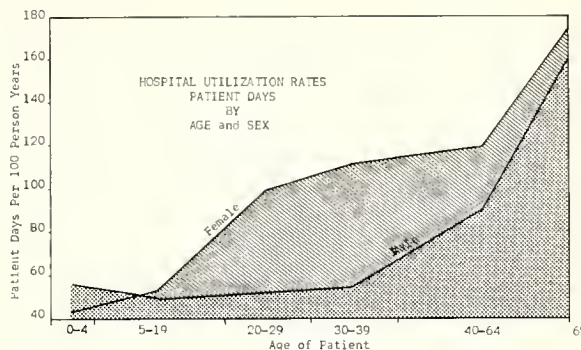


Fig. 2. Patient days per 100 persons per years.

by commercial group insurance, which will automatically require increasing rates and permit further loss of Blue Cross-Blue Shield coverage to commercial competition. To curtail the heavier claims, some Blue Cross plans restrict their benefits with age, or introduce some sort of co-insurance on the part of the subscriber, but our North Carolina plans have not yet taken any such action.

The health insurance program rate is very sensitive to changes in professional charges for the common procedures, whereas big increases in the rare procedure will make no appreciable change in the cost. Obstetrics, appendectomy, tonsillectomy, hysterectomy, hemorrhoidectomy, and herniorrhaphy account for about 70 per cent of all surgical costs of such insurance; a proposal to increase the allowance for appendectomy in the Doctors' Plan from \$75 to \$100 would have increased the cost of the surgical rider about 8 per cent, and for this reason it had to be rejected. "Free inpatient x-rays" in current Blue Cross certificates take about 15 per cent of the money, not counting the cost of improper hospitalization days to qualify the patient for his alleged benefits.

We have not yet evolved the goal of health insurance with adequate but not wasteful protection against financial hardship, coupled with clearly defined, simply administered, and effective co-insurance to maintain the patient's interest in economy. Hospital insurance began with increasingly complete coverage for relatively brief periods of hospitalization, and as actuarial experience was acquired, the benefits were increased by extending the number of days in hospital covered. Major medical or catastrophic cover-

Table 4
Impact of Age on Hospitalization and
Length of Illness⁽¹⁾

Age Groups	35-44	45-54	55-61	65-74	75+ years
Annual days of covered* hos- pital confinement per person insured, excluding maternity	0.55	0.75	1.05	1.55	2.0
Index number	100	136	191	282	364
Average days of illness, per patient	12	17	30	41	72
Index number	100	142	250	342	600

*The increase in the number of days of confinement is more gradual than the increase in the average amount of disability, but the difference may be due largely to the 28-day limit of hospital benefits, affecting few of the younger but an increasing proportion of older patients.

age is rapidly developing from the other end, usually paying 80 per cent of the cost of all sickness expense beyond a fairly high level of co-insurance paid by the patient, whose 20 per cent of further expense curtails wastefulness. Somewhere between these extremes, we must evolve a combination of both, eliminating waste and trivial frills, curtailing unnecessary hospitalization by co-insurance and by extending certain inpatient ancillary benefits to outpatient and doctor's office coverage. If we doctors wish to preserve our present system of medical care, it is essential that we exercise more vigorous leadership through Blue Cross and Blue Shield in the further evolution of health insurance to meet the real needs of our patients, before they turn to commercial insurance companies, hospitals, or the government for some remedy not to our liking but in their own best interest.

I. Family Health Insurance Survey (1953)

In 1953 a national Family Survey of Medical Costs and Voluntary Health Insurance⁽²⁾ was sponsored by the Health Information Foundation (a nonprofit organization supported by a large number of pharmaceutical and allied companies), and gives data on recent consumer habits in buying medical care. The cost of any contemplated extension of insurance to encourage hospitalization for trivial illness or diagnostic studies, or to provide annual physical examinations and preventive medicine, would have to be added in order to forecast comparable expenditures in the future.

During the previous year, 9 per cent of families reported no medical expense, and 50 per cent of families reported less than \$110 medical expense. The average cost per

family of all personal health services was \$207. Fifty per cent of the families reported medical expense exceeding 4½ per cent of annual income (the national average), 7 per cent had medical expenses exceeding \$495, 2 per cent spent half their total income for medical care, and 1 per cent had medical expenses greater than their entire income. One million families owed more than \$195 for medical expenses, representing about 1 family in 40.

The public annually spends about 4½ per cent of consumer income for health services, which in 1953 approximated \$10.2 billion, an average of \$207 per family. Approximately half of the total expense goes for hospitalized illness including professional care—about \$100 per family. Table 5 shows the breakdown of this great expenditure, and the present effectiveness of health insurance. On a national basis, 109 persons out of every 1,000 were hospitalized in 1952; approximately 1 person in 9, or 1 family in 3 suffered such expense. This ought to be a splendid field in which to develop a sound insurance program, where nine persons pay an annual "premium" to pay the hospital expense of the unlucky victim that year. Like term life insurance, the purchaser buys protection against a particular hazard for a particular year; with hospital insurance, 1 out of 9 will suffer the misfortune of major medical expense, and the other 8 are fortunate in escaping the hazard, realizing that next year some other member of the group will probably be the beneficiary. Theoretically, if every family in 1952 had put \$100 into such insurance, with adequate provision for administrative expense, there would have been a \$5 billion kitty to pay all hospitalization expenses for that year. In

Table 5

Analysis of Consumer Medical Expenses⁽²⁾

Annual Expenditures for Personal Health Services		Total	Insurance Pays	
in billions of dollars	%	\$10.2	\$1.5	(15%)
Physicians*	37	\$3.8	\$0.5	(13)
Hospitals	20	2.0	1.0	(50)
Medicines	15	1.5	* *	
Dentists	16	1.6	* *	
Other Supplies	13	1.3	* *	

**less than \$50 million

practice, free hospitalization would have increased the demand for such service, the treasury would be insolvent, and the plan would have to increase the dues or curtail benefits in order to continue its service.

In 1952 approximately two thirds of all families carried some sort of health insurance coverage. Table 6 should be interpreted alongside table 1 in order to calculate the unmet need for medical services which more universal health insurance would bring to medical attention. In the "upper third," 80 per cent have such insurance and undergo 75 per cent more surgical procedures than their uninsured confreres; but the insurance makes little difference in the admission rate or length of stay. In the "middle third," 71 per cent have health insurance; their hospital bed occupancy is about doubled, and their admission rate increased 30 per cent. In the "lower third," only 41 per cent are insured, and their admission rate is about doubled and their bed occupancy about two thirds higher than similar families without insurance. Even in the lowest 20 per cent of families, 30 per cent have some sort of health insurance. Obviously, much of the health insurance for the lower income families is purchased by industry as a fringe benefit, and not by the worker from his family budget. As health insurance becomes more attractive and the presently uninsured middle- and lower-income families are enrolled, it seems apparent that a tremendous reservoir of unmet medical needs will be opened up. At the time of this survey, only 37 per cent of North Carolinians carried health insurance—a little more than half the national average⁽⁴⁾.

Such a tremendous variety of health insurance programs is available to the public—ranging from highly restricted contingen-

Table 6

Health Insurance by Family Income⁽²⁾

Families	Annual Income	Health Insurance Coverage
Upper 1/3	above \$5,000 +	80%
Middle 1/3	\$3 to \$5,000	71% 63% of all
Lower 1/3	below \$3,000—	41% families
Lowest 20%	below \$2,000 or on welfare	30%

Table 7

The Value of Health Insurance⁽²⁾

(1953 Family Survey of Medical Costs)

With Hospital Insurance	
50% of certificates paid	89 + % of charges
With Surgical Insurance	
50% of certificates paid	75 + % of charges
With Obstetric Coverage	
50% of certificates paid	60 + % of charges

cies such as accidents or polio, up through the varying restrictions on benefits based on age and sex, to "comprehensive" insurance—that it is difficult to evaluate how well health insurance pays the costs. The data in table 7 are both interesting and reassuring.

The evolution of sound health insurance tends to stabilize the finances of the public, the hospitals, and the doctors. Any review of the health insurance problem must take into consideration the different problems facing each of these groups, and any proposed insurance program should be appraised from the view-point of each group.

III. The Public's Dilemma

In 1951, about two thirds of the population of the United States had some sort of health insurance, but in North Carolina only 37 per cent were covered—21 per cent by one of some 150 commercial companies serving this state, and 16 per cent by our two Blue Cross Associations (national average for Blue Cross is 27 per cent, in several states more than 75 per cent). There has been considerable growth since then, and I have been told that we now have about 50 per cent coverage in this state, but accurate data are not available to me. As the industrialization of our state continues, health insurance will automatically increase. Such insurance is sold at lower "wholesale" prices to employed groups, because actuarial experience is much better among those regularly able to work, and also because of savings in administrative costs. It is not sur-

prising that 80 per cent of families bought their health insurance through such a group.

In 1934 there were 55 hospital admissions per 1,000 population, averaging 13 days at \$5.50 a day, for an average hospital charge of about \$65. In 1952, 109 admissions per 1,000 people averaged 9 days at about \$20 per day, and hospital costs continue to climb with inflation and with expanding diagnostic facilities. We rarely abandon diagnostic tests, but more often modify them at added expense; we now take 12 leads for routine electrocardiograms, where we formerly took 4. The well equipped hospital is expected to provide flame-photometry and electroencephalography, involving additional ancillary expenses to patients served. Between 1936 and 1952 a study of laboratory tests and x-ray films used for inpatients in all major Cleveland hospitals showed an increase of 163 per cent in the former and 403 per cent in the latter.

Simple arithmetic would indicate that hospital insurance adequate to pay all the 1952 hospital bills should have been available for about \$21.50 per person, allowing 10 per cent for overhead; but health insurance is complicated by numerous pitfalls which are not understood by the public or by the doctors. The people who buy health insurance have greater than average expectancy to use it, and their hospitalization costs are approximately 50 per cent more than similar costs for those who do not have such insurance⁽²⁾.

The American budget has included the mortgage, the grocer's bill, the television and vacuum cleaner payments. Up until recently it has not included the doctor and the hospital. This has come to be the last item embraced, in the creditor economy we have. Postpayment has failed, rightly or wrongly. Left out of the budget, our economy being what it is, bills for illness would stand little chance of payment. Incorporated in the budget, through prepayment, doctors and hospitals stand a chance, and the families avoid the inevitable threat of bankruptcy from a serious illness⁽⁵⁾.

The public assumes that good hospital insurance should pay the entire hospital bill, without realizing the abuse and exorbitant expense that such protection inevitably attracts. The public does not buy complete automobile liability insurance for the simple reason that it costs five times as much as the same protection with a \$100-deductible rider. The law does not permit complete fire insurance coverage of property, in order to

keep the owner interested in fire prevention and curtail the temptation of arson. If there is a clear-cut financial loss to the insurer, he remains interested in avoiding the hazard; with prevailing hospital insurance, the patient realizes that he will be expected to pay some of the bill upon his discharge, but such "tailend" co-insurance is indefinite, it cannot be accurately calculated in advance, it does not adequately serve to deter the necessary hospitalization, and too often it leaves the patient disgruntled with his health insurance because his share of the bill proved to be greater than he expected.

The public is rebelling against the practice of certain insurance companies which reject claims with a heavy hand, and which cancel or restrict coverage at the next renewal date following the onset of any potentially expensive recurrent claim. Our last legislature considered a number of proposals designed to curtail such practices, adopted some, and fortunately rejected others that would have handicapped the good as well as the bad companies. The authority of the insurance commissioner was strengthened in handling such problems, without being crippled by red tape.

The public is rather skeptical of professional coverage because of additional professional charges frequently rendered above the indemnity paid by the insurance company. The company which advertizes "surgical benefits up to \$400" (for some unusual procedure) may allow \$20 for tonsillectomy, and \$50 for appendectomy or herniorrhaphy. The surgeon naturally makes an additional charge, but often fails to explain to the patient that the benefit was not only less than his usual charge but also less than the benefit for the low income group under the Doctors' Plan, or less than the State Compensation Commission's allowance for similar care of injured workmen. When such a disgruntled patient tells his friend, the usual increment to spicy rumor occurs and the details are magnified.

It should be the goal of every doctor to encourage all his patients to buy good health insurance, and the doctor should be doubly careful not to let any patient feel that he has been overcharged because his health insurance provided professional benefits. A message from the president of the New

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HOSPITAL
SAVING
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20 YEARS AGO

THE BLUE CROSS IDEA
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2

5



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\$5,000.00	\$10,000.00	\$ 50.00 weekly	\$ 90.00	\$45.50
5,000.00	15,000.00	75.00 weekly	131.00	66.00
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Perhaps there is insurance coverage. Ask your patient about this, but only after you have informed him of your own charge. By so doing you convince your patient that you are not taking advantage of his insurance coverage by adding an extra charge. By approaching the matter in this manner you also establish the fact that in many instances such insurance helps pay the total cost, that it does not pay in full. If your patient is eligible for Service Benefits, in which the doctor's fee is the Blue Shield allowance for lower income members, explain what your participation in this program means. If you are not certain of his earnings, why not ask him if his income is less than the Service Benefits income limit.

Ratio of loss

One of the important yardsticks of an insurance company is its "loss ratio," or the ratio between the benefits paid to the premiums earned. In *group* accident and health coverage, the 1953 annual summaries of 590 commercial insurance companies showed a loss ratio of 85.6 per cent; for similar protection sold directly by an agent to the *individual* or family, the loss ratio was 50.3 per cent, the latter category constituting about one quarter of the business on a dollar basis. Every company selling such insurance in North Carolina must file annual reports to our State Commissioner of Insurance, whose office will send on request a list of all such companies, with the amounts of premiums collected and of benefits paid by each. One hundred and fifty three such companies have a little more than 50 per cent of the business; 22 companies each have at least 1 per cent of the state's approximately 60 million dollar accident and health business.

Unfortunately, these annual reports include not only health insurance, but also disability health insurance in the figures submitted by companies providing such protection. It must also be remembered that with the rapid expansion of enrollment by any company selling health insurance, losses during the first year are curtailed by several limitations usually incorporated in such insurance, and the loss ratio tends to increase as the years pass. In table 8, 26 companies (87 per cent of the total business) are listed in order of their volume of business in North Carolina, giving the percentage of accident and health insurance sold in North Carolina during 1954 and each company's loss ratio for the state.

Table 8

Company	Loss Ratio	Share of Business (Per Cent)
A.	85.96	14.7
B.	84.41	10.0
C.	74.05	8.7
D.	32.93	6.2
E.	73.28	5.8
F.	58.48	4.8
G.	54.18	3.9
H.	36.38	3.1
I.	66.96	2.9
J.	72.68	2.8
K.	72.55	2.7
L.	75.38	2.0
M.	23.24	1.8
N.	75.16	1.8
O.	21.34	1.8
P.	106.95	1.7
Q.	43.70	1.6
R.	38.70	1.5
S.	26.65	1.2
T.	45.50	1.1
U.	70.61	1.0
V.	33.51	1.0
W.	44.04	0.9
X.	41.29	0.9
Y.	81.46	0.8
Z.	59.69	0.8

From time immemorial professional charges have been determined in part by the patient's ability to pay, but today an occasional doctor reasons that coverage by health insurance is the equivalent of a manifold multiplication of the patient's income from the standpoint of estimating professional fee. Current health insurance rates are fundamentally based on the custom of previous years with regard to frequency and length of hospitalization and the amount of professional benefits disbursed. It is obvious that insurance companies cannot pay unlimited fees for professional services, but must have a specific list of professional services and appropriate fees upon which to calculate rates. The wide variation in such benefits among the hundreds of insurance programs creates additional confusion on the part of the public, the doctors, and the insurance carriers. By voluntary cooperation and participation, we doctors are the only ones who can agree to a satisfactory schedule of professional benefits for particular income classifications, and Blue Shield Insurance was based on this concept.

The present income limits of our Doctors'

Table 9

Paid Civilian Full-Time Federal Employees (U. S. Civil Service Commission 1953)		
Annual Pay	No. Employees	Per cent of Total
Less than \$2,500	51,384	2.4
\$2,500-\$3,500	804,155	37.1
\$3,500-\$4,000	414,840	19.1
\$4,000-\$6,000	769,355	35.4
More than \$6,000	128,994	6.0
	2,168,728	100.0
Average Salary		
Mean	\$4,025	
Median	\$3,770	

Plan are \$2,400 for the individual, or \$3,600 for the family. A recent Kiplinger report shows that one out of every 4 wives holds a job, but only 15 per cent of wives who have children work, and the majority of these work only part time; the median income in the south for a married man is \$3,400, and for a working wife \$650, or a total of \$4,050. Civil Service employees are not considered highly paid (table 9): yet only about 40 per cent of their personnel would be eligible for family service benefits under our plan, and only about 2 per cent of them would qualify for service benefits if unmarried. One of our major industries recently made a wage survey in the major cities of our state to ascertain the annual earnings for different categories of employment, both male and female. The Doctors' Plan is obviously not very attractive to most of the categories, because our income limits fail to offer them service benefits.

Labor unions are interested in getting maximal health insurance coverage for their members and families and are desirous of getting service professional benefits. Industry has found that good health insurance is a valuable fringe benefit both to the workers and to the company, and many employers pay a substantial part of the cost of such insurance. Some of the higher-wage chemical and electronic industries recently established in our state sponsor health insurance for their employees comparable in cost to our Doctors' Plan, but choose commercial carriers, who can offer no service benefits, rather than our Blue Cross-Blue Shield. An insurance program for all employees which offered service benefits to some but not to others would introduce an element of po-

tentially serious discord in the company's labor relations. The company feels that it must treat all its employees alike; service benefits for all would be acceptable, but otherwise service benefits for none. The Doctors' Plan has been rejected by many groups for this reason; a companion certificate with service benefits for a higher income group would answer this objection.

Sound health insurance

The following pertinent suggestions for the purchase of sound health insurance were given in an article published in *Changing Times*, the Kiplinger magazine, for December, 1953: (1) Don't try to insure against routine or predictable expense, such as office visits, annual examinations, and so forth. (2) Get blanket coverage that will pay off if you have big medical expenses from any illness. (3) Concentrate on coverage that will reimburse you substantially for substantial expenditures, remembering that half of the average hospital bill goes for "extras" beyond the posted room-rate. (4) Try to get in on a group policy to obtain "wholesale" rates and to minimize restrictions and exclusions. (5) Look with favor on being your own co-insurer. (6) Figure on paying between 2 and 3 per cent of your take-home pay for health insurance, and allow a similar amount in the family budget for medical and dental bills not paid by insurance.

In North Carolina, we might suggest four additional criteria: (1) Can I continue this health insurance when I leave my present group, and after retirement at 65? (2) Does this company customarily refuse to renew coverage at the first sign of a potentially expensive disease, or demand a rider excluding such disease from future coverage? (3) Is this company spending too much money on promotional advertising instead of on benefits to policyholders? (4) What percentage of premiums collected by this company is returned in the form of benefits? (Every physician should write our State Commissioner of Insurance for his annual "Annual Health and Accident Experience" summary, listing every company doing such business, and giving their premiums collected and benefits paid during the previous year.)

One of the most successful Blue Shield

Table 10

Annual Cost for the Doctors' Plan
(Ward costs or \$8 towards private accommodation)

Group Rates	Individual	Family	
No co-insurance	\$42.00	\$114.00	
\$25-deductible	36.00	97.20	
\$50-deductible	32.00	87.00	
Direct Rates	Male	Female	Family
(No co-insurance	\$44.40	\$58.80	\$149.40)*
\$25-deductible	38.40	51.00	128.40
\$50-deductible	34.20	46.20	115.80

(Semi-Private or \$10 towards private room)

Group Rates	Individual		Family
No co-insurance	\$47.40		\$127.20
\$25-deductible	41.40		110.40
\$50-deductible	37.80		100.20
Direct Rates	Male	Female	Family
(No co-insurance	\$49.80	\$65.40	\$163.80)*
\$25-deductible	43.80	57.60	142.80
\$50-deductible	39.60	52.80	130.20

*Direct coverage sold only WITH co-insurance

Plans was inaugurated in Michigan about 1939, with income limits which offered service benefits to about 80 per cent of the population in that industrial state. When in 1948 they found that only about 20 per cent of the population was eligible for such benefits because of the general rise in wages, they established a companion certificate with higher professional benefits, and again 80 per cent of the population was eligible for service benefits under one or the other certificate. In North Carolina, the income limits initially proposed in 1946 were increased even before the Doctors' Plan was inaugurated, and are now quite unrealistic in that we are offering a program of service benefits for \$3,600-income families which costs nearer 4 per cent than 2 per cent of their income. There is a great market among families with incomes less than \$6,000 which should be met with a financially attractive companion certificate, offering about 33 per cent higher professional benefits, and the same hospital benefits at only about 10 per cent increase in cost.

IV. The Hospitals' Dilemma

Few doctors appreciate the postwar financial predicament of our hospitals. Their expenses have increased seven-fold since 1935, and continue to rise⁽⁶⁾. Admissions are doubled or tripled, and the average length of stay is 30 per cent shorter, but it takes twice as many employees to accomplish the

Table 11^(1a)

Factors affecting the Cost of Hospital Care
(Commission on Financing Hospital Care 1954)

Total Non-Federal Hospital	1935	1949	1952
Hospital beds (thousands)	398.7	524.0	564.9
Beds per 1000 (population)	3.1	3.5	3.6
Hospital expense (millions)	\$438.7		\$2,718.3
Admissions (millions)	7.0	15.0	16.9
Admissions per bed	17.0	28.0	30.0
Admissions per 1000 population	55.4	101.2	108.8
Patient days per 1000 population	725.0	963.0	973.0
Length of stay (average)	13.1	9.6	8.9
Hospital personnel (thousands)	308.8		710.3
Cost per patient day	\$5.50		\$20.37
Index of ward rate	100.0	163.8	343.1
Index of semi-private rate	100.0	154.0	297.2
Index of private rate	100.0	150.4	266.5

speed-up—skilled employees now hired in competition with the labor markets at prevailing wages. Endowment and other non-patient income in 1935 paid about 30 per cent of hospital costs, but now pays only about 11 per cent. The average *per diem* cost of hospital care in 1935 was \$5.50, and in 1952, \$20.37. The major portion of these tremendous changes occurred from 1946 to 1952, and the trend continues.

These increased expenses have not been passed on to all patients as charges for bed accommodations, which have been roughly tripled but still are comparable to hotel room rates. The average patient engages hospital accommodations which cost the hospital about \$4 more than the posted rate.

The hospital deficit is made up on charges for ancillary services⁽⁴⁾ (laboratory, drugs, x-ray, oxygen, infusions, and so forth), partly because the insurance (especially Blue Cross) pays for a big share, and partly because the public has not been kept informed of what is taking place. Insofar as a high admission rate reflects short-term "diagnostic" admission, the insurance programs offering to pay for extras suffer unfairly. Theoretically insurance divides the cost of hospitalized illness among many persons who escape the misfortune, but once in the hospital the critically ill patient needing many ancillary services is handed the hospital deficit left by the majority of patients who paid less than their own share of actual hospital expenses because they needed few "extras."

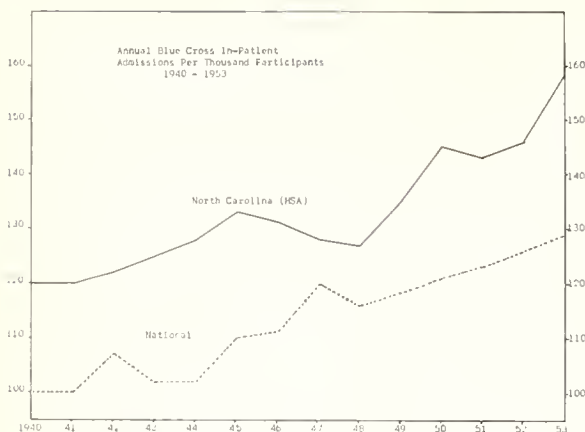


Fig. 3. Hospital admission rate per 1,000 participants.

Hospitals generally are promoting the expansion of outpatient services and the concept of the hospital as the hub of all community medical service. The increased use of profitable ancillary services would help balance the hospital budget, and hospitals encourage insurance programs to broaden such "preventive" and outpatient benefits at the hospital. They bitterly oppose the same insurance benefits in doctors' offices, where much unnecessary hospitalization would be avoided if similar benefits were offered. It took our Blue Shield Advisory Committee two years to persuade our State Hospital Association that the rising cost of Blue Cross Insurance could be checked dramatically by introducing sufficient co-insurance to curtail our high admission rate in North Carolina; they reluctantly allowed it to be initiated only with the full Doctors' Plan coverage, not with their existing certificates.

In North Carolina our hospital beds increased from 8,475 in 1944 to 13,025 in 1954. The United States Hospital admission rate in 1952 was 108.8 per 1,000 population; it was 127 for all Blue Cross subscribers, but in North Carolina our patients almost lead the nation, with an admission rate approaching 170 for our Blue Cross-Blue Shield Association. Hospitals desire high admission rates, encourage diagnostic admissions which will entail ancillary services, want to maintain a high percentage of occupancy, and favor the insurance program which most nearly pays 100 per cent of the hospital bill. They oppose any form of co-insurance to curtail unnecessary hospitali-

zation, any restriction of payments for ancillary services, and any proposal that hospitalization might be avoided if insurance permitted similar benefits outside the hospital.

V. The Doctors' Dilemma

Of the annual expenditures for personal health services, approximately \$3.8 billion dollars is paid to physicians, 13 per cent of which is now paid by insurance. The surgeon's fee has long been covered by health insurance, at least on an indemnity basis. Obstetric benefits also have been popular, usually on a limited basis, since the "risk" is not "beyond control." Coverage for non-operative medical care is more recent in development, more experimental in evolution, and more difficult to define and administer fairly. Though late in starting, it is the most rapidly growing part of health insurance, and will become increasingly important. Because of its greater risk in inviting hospitalization which would not have been otherwise engaged, it involves greater hazard to the insurance fund and must be cautiously sampled to derive sound actuarial experience.

From experience with the State Compensation Commission and with insurance indemnity policies, doctors are understandably cautious and reluctant to assign to any third party their time-honored right to vary charges in accordance with the patient's means. They fail to concur in the social worker's enthusiasm to get every possible free service for a very nebulous group of "medically indigent" families, using a highly elastic yardstick. Many of them are vociferous in their opposition to any clarification of the confusing muddle of professional fees for particular income levels. Without such clarification upon which to base costs, no insurance plan could undertake to pay unlimited professional fees, and the future satisfaction of the public for voluntary health insurance is limited in several states. Blue Shield offers one certificate with service benefits for the "low income" group, comprising about 40 to 50 per cent of their population, and another certificate with higher professional fees as service benefits for "intermediate income" families, comprising another 30 to 40 per cent of the population for whom the cost is reasonable and the plan successful.

Table 12

1953 Family Survey of Medical Costs (in billions of dollars)			
Annual charges for	Total	Paid Through Insurance	
Physicians' Services	\$3.8	\$0.5	(13%)
Surgery (21%)	\$0.8	\$0.3	(38%)
Obstetrics (11%)	\$0.4	\$0.1	(25%)
Other (68%)	\$2.6	\$0.1	(4%)

The top 20 to 25 per cent of the population will also find that such insurance is highly valuable, despite the fact that they are not entitled to service benefits and are liable for additional charges. In the far west, competition from Permanente and similar health plans has led the doctors to offer service benefits in nine Blue Shield Plans which have no income limitation, and the public seems to prefer the free choice of physicians and hospitals thus offered. The family income limits for service benefits in 47 Blue Shield plans are tabulated in table 13, showing an average of \$4,323 and a median of \$4,200. In North Carolina our family income limit is \$3,600; 2 per cent of this annual income would about pay for hospitalization insurance only, obviously making our Doctors' Plan coverage too expensive unless part of the cost is paid by industry.

Under voluntary prepayment health insurance, more people eventually pay more money for health needs, just as with installment buying they buy more cars and appliances. "Prepayment has expanded the group which can afford the price of prepaid care at benefit levels which meet their need for protection . . . The extension of prepayment will have the effect of shifting families and individuals from the group which cannot pay for care at the time of illness to the group which can and does pay for the cost of its care."^(6b)

Blue Cross and Blue Shield associations are usually operated by trustees representing the doctors, the hospitals, and the public^(6c)—all interested in paying not only just claims but also many borderline claims, insofar as funds permit. They have no stockholders except the subscribers, pay no dividends from "profit," and employ salaried rather than commissioned salesmen. Benefits are paid *directly* to the hospital and doctor. A committee of doctors passes on the merits of any complaint by a physician about

Table 13

Summary of Blue Shield Income Limits October 1, 1954		
Family Income Limits	No.	
\$3,000	5	
\$3,200	1	
\$3,500	1	
\$3,600	7	
\$4,000	9	
\$4,200	2	
\$4,500	3	
\$4,800	3	
\$5,000	11	
\$5,500	2	
\$6,000	3	
	—	
	47	
\$4,200	Median	
\$4,323	Mean	

his fee, and may allow additional compensation under extenuating circumstances. Such a committee can initiate changes in the fee schedule when inequities are pointed out. The State Medical Society could promptly terminate Blue Cross or Blue Shield by withdrawing its official support, necessary for national recognition. Through such a set-up, we doctors can work to evolve still better insurance for all parties concerned, as further experiments are tried out and sound actuarial experience is gained.

The doctor is reluctant to act as policemen in trying to protect insurance funds from abuse of too-attractive in-hospital benefits. He is under frequent pressure by the patient and family to arrange hospitalization to get "free x-rays" or similar service which the insurance does not offer for a "diagnostic admission." If he is honest, the patient is apt to go elsewhere, or if the insurance claim is rejected, the insurance agent explains to the patient that it would have been paid if the doctor had filled out the claim form "properly." In either event, the doctor is unjustly criticized, and the less scrupulous doctor is praised for "looking after his patient's interest."

The public logically expects their doctor's advice on health insurance to be reliable, but unfortunately most of us have had little opportunity to study insurance principles, policies, or companies. In his own community, a doctor becomes prejudiced against Company A because it rejects so many of his patient's claims, against Company B

because the fees for his field of practice appear inadequate to what others are allowed, against Company C because it refuses to pay for accident care at his office when it would have paid for it at the hospital emergency room, against Company D because they rejected payment for a chest roentgenogram in a patient who was hospitalized for duodenal ulcer, against Company E because the patient got the money and never paid the doctor, against Company F because it pays for chiropractic treatments, and so on down the list. When the patient asks about a particular form of insurance he is contemplating, most doctors evade a direct answer, because they are as uncertain as the patient. Those of us who have worked in the development and supervision of our Doctors' Plan are impressed by the lack of interest on the part of many doctors, usually in proportion to their lack of understanding of how insurance operates and their failure to recognize its increasing importance in medical practice. When the doctors in a community are convinced that a certain insurance is superior to others, their open support will soon guide their patients to better coverage. So long as the public and the doctors are both confused, much inferior health insurance will be sold, and our patients will suffer. It is the inescapable duty of our profession actively to guide the further evolution of health insurance toward the goal of adequate protection without the wastefulness which now threatens the future of voluntary health insurance.

Conclusion

We doctors are now determining whether voluntary health insurance will succeed or fail; if we allow it to fail, some form of compulsory governmental health "insurance" will surely take its place. It is the doctor who arranges for hospitalization, decides which ancillary services are necessary, and determines when the patient should be discharged. The too-attractive benefits of our Blue Cross certificates in North Carolina are an invitation to abuse, but the complaisance of many doctors is necessary for our subscribers to run the admission rate up to 170 per thousand per year. Every physician is a trustee for ALL health insurance funds, and too often we are placidly permitting patients to abuse their insurance—trivial ad-

missions that would not be considered without insurance, admissions for diagnostic studies specifically excluded from insurance coverage, prolongation of hospital stay for convenience, and so forth. "If abuses are permitted to continue, they will doom the voluntary prepayment system of medical care by making it too expensive for people in the low income brackets. Many doctors fail to realize this threat and often, wittingly or unwittingly, are active instigators of or participants in such practices."

Recommendations

1. That a companion Doctors' Plan certificate be made available with service benefits for the middle-income group (\$4,000 individual and \$6,000 family income), incorporating a higher schedule of professional fees.

2. That the income limits for our present Doctors' Plan Certificate be increased for the individual from \$2,400 to \$3,000, and for the family from \$3,600 to \$4,200.

3. That we doctors recognize our responsibility in protecting all health insurance funds from unjustified hospitalization and service claims, thereby reducing the high cost of health insurance in our state.

4. That doctors familiarize themselves with the health insurance problems of their patients, and openly support the better administered programs.

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"The prime object of the medical profession is to render
service to humanity; reward or financial gain is a subordinate
consideration. Whoever chooses this profession assumes the
obligation to conduct himself in accord with its ideals."—Prin-
ciples of Medical Ethics of the American Medical Association,
Chapter 1, Section 1.

DECEMBER, 1955

PROPOSED SOCIAL SECURITY AMENDMENTS

The longest step yet taken toward the complete socialization of this country was the action of the House of Representatives on July 28, when H.R. 7225 was rushed through the House without public hearings, under a procedure banning amendments and limiting debate to 40 minutes.

This measure would make all workers covered by Social Security eligible for monthly benefits if they are totally and permanently disabled at or after the age of 50; it would lower the age at which women are entitled to old age insurance benefits from 65 to 62; it would extend monthly benefits for permanently and totally disabled children beyond the age of 18, and expand compulsory social security coverage to all-

self-employed professional groups except physicians. And a most important amend-ment would increase the tax rate for self-employed persons by $\frac{3}{4}$ per cent every five years until a maximum of $6\frac{3}{4}$ per cent is reached by 1974. For employed persons the rate would be increased for both employer and employee by $\frac{1}{2}$ per cent—from 2 to $2\frac{1}{2}$ per cent—until by 1974 it would reach a maximum of $4\frac{1}{2}$ per cent for each, or a total of 9 per cent of the employee's gross income⁽¹⁾.

The minority report of the committee pointed out that the tax was on a gross, not a net income, and hence would eventually be the equivalent of a net income tax of 20 to 36 per cent of a self-employed person's income of \$42,000⁽²⁾.

The majority report of the Ways and Means Committee qualifies the statement that "Your committee has always very strongly believed that the system should be actuarially sound" by saying. "The concept of actuarial soundness as it applies to the old-age and survivors insurance system differs considerably from this concept as applicable to private insurance."⁽³⁾

To a plain, blunt, non-political doctor these statements are contradictory. Just why should an agency of the federal government expect to have a more fortunate experience than did life insurance companies in handing out cash benefits to those certified as totally and permanently disabled? The Hon. Noah H. Mason, in his statement, said that

In the past when public hearings were held on the question of providing disability benefits under the social insurance system, members of the medical profession, insurance company representatives, and others who have had actual experience in administering disability insurance have strongly warned against the dangers inherent in this approach. These people are anxious to be heard before the Nation is committed to a program of disability insurance benefits, but they have not been given an opportunity. This is a further reason why final action should not be taken without public hearings⁽⁴⁾.

Although the administration of the bill's provision would come within the province of the Department of Health, Education and Welfare, the advice given the committee by the then Secretary of the Department was completely ignored. In a letter to the Hon. Jere Cooper, chairman of the Ways and Means Committee, Mrs. Hobby⁽⁵⁾ urged strongly that "a thoroughgoing review and

inquiry into the issue raised by the confidential draft [of the Committee's report on H.R. 7225] are essential." She then raised a number of questions which needed to be answered before any change is made in the social security system, and said that

Within the Administration, we have not had an opportunity to make a study of the proposals contained in the confidential draft bill, and have particularly not had an opportunity to solicit the views of groups and individuals outside of Government."⁽⁶⁾

Dr. J. Duffy Hancock, chairman of the Social Security Administration Medical Advisory Committee, in a letter to Mr. Rosewell Perkins, Assistant Secretary of the Department of Health, Education and Welfare, said that he was "very much opposed" to the proposed measure, and that with two or possibly three exceptions the entire committee concurred in his opposition."⁽⁷⁾

Although Mrs. Hobby's letter was dated June 21 and Dr. Hancock's July 3, both in ample time for consideration by the Ways and Means Committee, they were evidently ignored when the committee railroaded its bill through the House on July 28.

Fortunately, the bill cannot be enacted into law until it has been passed by the Senate. Senator Harry Byrd, chairman of the Senate Finance Committee, which will consider the bill, has promised that public hearings will be held. It is to be hoped that every doctor will write his senators and every member of the Finance Committee, and at least express the hope that the whole question of Social Security be reviewed carefully before future generations are saddled with the crushing tax load that the passage of H.R. 7225 would make inevitable. The members of the Finance Committee are:

Democrats

Harry Flood Byrd of Virginia
Walter F. George of Georgia
Robert S. Kerr of Oklahoma
J. Allen Frear, Jr., of Delaware
Russell B. Long of Louisiana
George A. Smathers of Florida
Lyndon B. Johnson of Texas
Alben W. Barkley of Kentucky

Republicans

Eugene D. Millikin of Colorado
Edward Martin of Pennsylvania
John J. Williams of Delaware
Ralph E. Flanders of Vermont

George W. Malone of Nevada
Frank Carlson of Kansas
Wallace F. Bennett of Utah

It might also help to let one's representatives know that he was remiss in his duty when he allowed Mr. Cooper to violate the rules of common decency as well as of democracy in forcing through such an important measure without a public hearing. Representatives Deane and Durham were not present when the vote was taken, but all the other North Carolina representatives voted in favor of the bill. Evidently they were impressed, as were the signers of the minority report, with "the undoubted political attractiveness of all of its proposals"—but they should have also agreed with the conclusion of the minority report:

We do not, however, believe that our committee has discharged its obligation to either the Congress or to the American people by its brief and closed-door consideration of this vital legislation. We have sought to point out the grave social and economic implications of the bill. We have dwelt at some length upon the staggering ultimate costs of this developing program because we do not believe that either the Congress or the public has any conception of its magnitude.

It is our earnest hope that the questions we have raised will lead thoughtful citizens everywhere to search for the answers. The Social Security system was created to give our people confidence and faith in their future. It should be above politics⁽⁸⁾.

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* * *

SCIENCE AND FAITH

Dr. Vannevar Bush, who will retire January 1 as president of the Carnegie Institution of Washington, in his last report discusses the old, old question: Why do scientists engage in research without any immediate prospect of a practical application? And why are they willing to work on such long-range projects with little pay, when they could patent inventions that would make them rich?

According to an editorial in the *New York Times* (Dec. 11), Dr. Bush thinks that this type of scientist lives by faith. At least he still believes in cause and effect.

At heart he still believes in cause and effect and proves his belief by depending on them in his reasoning. For that matter Dr. Bush finds that all our reasoning about what we see and feel is an act of faith; for the seeing and feeling and resultant reasoning are "built on premises which we accept without proof or the possibility of proof." So for all his materialism a scientist has something of the mystic in him. He knows that there is more to science than a study and an interpretation of the external universe—knows that there is some other reality within himself.

Dr. Bush might well have used as a text for his valedictory message the scriptural verse (Hebrews 11:1) "Now faith is the substance of things hoped for, the evidence of things not seen."

* * *

A CHRISTMAS MESSAGE

It is customary, at this season of the year, for most journals to have some editorial reference to Christmas. This year it is necessary only to refer our readers to page 594 of this issue, containing Dr. J. P. Rousseau's President's Message. This JOURNAL is proud to point to it as a sort of guest editorial—and to agree with the small boy who, in order to shorten his bed-time routine wrote his nightly prayer on a piece of paper, attached it to the head of his bed, and every night pointed to it, saying, "Them is my sentiments."

Thank you, Dr. Rousseau, for the best yet of your splendid President's Messages.

* * *

MEDICAL SCHOOL MYTHS*

Modern methods of communication make possible the rapid spread of mythology. Error, like truth, has taken to wings. In our field of interest, for example, there have been developed several myths about medical schools. Thus it is alleged that the A.M.A. practices a rigorous birth control when it comes to the development of new medical schools; that only A students can get into medical schools; that medical student enrollment has not kept pace with rising population figures; that most applicants get turned down.

Since 1910 our population has upped 76 per cent (from 92 to 162 million). Physicians graduated from approved medical

schools have skyrocketed 117 per cent (3165 in 1910; but 6861 in 1955). If the A.M.A. or any other organization is exercising birth control here, that job is a pretty poor one!

The myth about trouble getting into medical schools has developed out of this kind of statistic: In the 1953-4 year there were about 50 thousand applications to medical schools, but only about 7500 admissions. So, on the face of it, the chance of admission would seem to be one in six. But the 50 thousand applications represented 14,700 different persons. Since 7500 were admitted, the chance of getting in is better than 50-50. Only 21 per cent of the accepted applicants had "A" averages, so apparently the medical schools are not looking for a cerebral aristocracy.

Five completely new medical schools have developed since World War II. In 1910 there were only 66 approved medical schools; in 1954 there were 80, an increment of 21 per cent in three decades.

Sure, it is harder to get into a medical school than in Arthur Murray's. But who would have it any other way?

* * *

DR. DONNELL COBB

On November 12 Dr. Donnell Cobb of Goldsboro passed from this life to Life Everlasting. He was the third past president of our State Society whose earthly career was recently ended. Like the others—Dr. James W. Vernon and Thurman D. Kitchin—he had lived for many years under the Shadow of Death. He kept at work until the very end, however, and literally died in harness.

Dr. Cobb was president of our Society in 1943. He was also a member of the American Medical Association, the Southern Medical Association, the American Association of Railway Surgeons, the Southern Surgical Association, the Southern Society of Clinical Surgeons, the Tri-State Medical Association, and was a Fellow of the College of Surgeons.

Donnell Cobb was not only an excellent surgeon: he was a fine citizen, a loyal friend, and a cultured gentleman. He will be greatly missed in the years to come.

To his family this JOURNAL extends heartfelt sympathy.

*Reprinted from the Journal of the Medical Society of New Jersey, September, 1955, page 444.

PRESIDENT'S MESSAGE

A Merry Christmas and a Happy New Year!

Christmas is a contrasting, cheerful and bright spot on the dim horizon because of the wonderful spirit of love, tolerance, humbleness, and reverence it generates in all of us.

December is the month of the year in which we should be left free to devote our spare time to our families, friends, and loved ones; to meditate and rejoice over the blessed season of peace on earth and good will toward men.

My first wish is a Merry Christmas to everyone, and especially to every member of the Medical Society of the State of North Carolina. My second wish is a Happy New Year, which follows in just one week. A gift of 365 new days to do with as we please is a most precious gift to all—rich and poor alike. My sincere hope is that the New Year will be the very best for you and your patients.

Christmas, like other major events of life, has the element of promising us another chance—a challenge to do better. All these events call upon us to take inventory, to stop and take stock of our past achievements in order to plan better for the future. The past promises nothing more than pleasant memories and the assurance that regrets, old wounds, scars, grief, and sorrow will be healed and forgotten.

Time is an elusive thing, but one of our greatest natural therapeutic agents. There is no better treatment for grief and sorrow than the passing of time. "When all human efforts fail, nature will often prevail."

Too many people feel that money is more precious than time. It isn't really. The Philadelphia Mint never printed anything as precious as a year, a month, a day, an hour, or a moment. The moment is the thing that gives our life the golden meaning. Time is so short that it seems that man spends his entire life like the May fly from sunrise to sunrise of the following day. Time is like a vapor which vanishes with the tomorrow. Too often we never realize this truth until time has all but run out and there is little of it left. Life is short, but the things we do in life are eternal, and we do the things

that are in our heart. We must, therefore, guard the heart with diligence, for we know not what the issues of life will be.

Most people, never learn to spend their time as well as they spend their money. We can make and spend fortunes, and we remake them. This is not possible in the spending of time. It can never be remade. We actually are not too different from the May fly. A child of six looks forward to the day when he will be seven. A child in his teens looks forward to the day when he will be an adult. Before we know it, we are in the sunset of our years. Then there will be but little to look forward to in the future. Our only pleasures will be to look backward to the past for fond memories. Time must, therefore, be spent in acquiring memories which are sweet — memories that bloom, rather than memories that are bitter and fester in one's mind. In this way only will the strenuous duties of life be an enduring pleasure forever. By diligently striving to put more useful years in our living, rather than more wasteful years in our lives, the final event of life may be the most peaceful of all events.

The rapid passing of time recalls a pleasant day spent with a dear friend on a lake fishing. We started with the sunrise. It was a lovely day. We had many exciting battles with the game fish. There was much friendly rivalry and loquacious kidding. All too soon the sun was setting behind the hills in the west. I said, "It is getting dark. We must get out of here while we can still see the boat landing." He said, "Give me your pencil I want to write a poem." This is what he wrote:

The years steal my youth away,
They steal my pleasures, too.
But the remembrance of them,
Will half my joys renew.

All about us we see the feverish spending of money to buy a little pleasure. The result is much grief, sorrow, hangovers, headaches, sickness, family trouble, and legal problems. It is a good thing to have money and the things money can buy. But it is a good thing to check up and make sure we haven't forgotten things money can't buy. Money can't buy friendship; it must be earned. Money can't buy a clear conscience;

square dealing is the price tag for this. Money can't buy happiness. Happiness is a mental attitude, and one may be as happy in a cottage as in a mansion. Money can't buy an education, nor can poverty shackle a man's mind.

In our humble feeble way we must try to emulate the "Great Physician," who possessed the touch of life. Some professionals have it and some do not. Some professionals know the price of everything but the value of nothing. Being exposed to "the gray of grateful hearts" might change our opinions on the value of things. When a lay person feels the touch of life in a professional, he willingly entrusts himself to the superior knowledge—the perfected skill. It is a life-giving force of emotional understanding—a faith—the fruit of experience richly deserved.

Physicians are not unlike the rest of mankind. We are members of the great family of races, subject to all errors and shortcomings that man is heir to. We are perhaps more favorably blessed than others, by reason of study, training, skill, and license to bring to people the peculiar benefit and blessing of the best medical care in the history of the world. We are further blessed in that we deal 24 hours a day with America's greatest natural resource—people.

In our trend of thinking and living we must not exhibit an air of superiority or aloofness, but should humble ourselves, as members of the human race, whose major need is humility and the realization that other men's problems are our problems also.

Nevertheless, we have the right to be proud of our honored profession and its achievements. We must cheerfully give the public justice and in the same breath demand justice for ourselves.

Good Queen Bess of England said in 1591:

About medicine and doctors neither men or angels can hold harmonious or confident opinions. There is the blessed assurance of the doctor that his works will follow him, not into the grave, but into the lives of his patients. Beneficiaries will rise up and bless him for the lives he has saved. A doctor is dead, but in a sense a doctor does not die. Patients will flock into his office, feeling somehow, that his spirit is still there. His room will be taken by another, but his mantle will have been taken, too. In all confidence his patient's lives and the lives of their loved ones will be brought to his strong room, by his students who watch over them.

JAMES P. ROUSSEAU, M.D.

Committees and Organizations

PUBLIC RELATIONS COMMITTEE THE ADVANTAGES OF PRIVATE MEDICAL CARE

RAYMOND RANDOLPH

HENDERSON

Our amazing American medical system has given our people many advantages in a comparatively short period. Doctors, nurses, technicians, scientists — all connected with the profession have labored to make us a virile and healthy nation. Afflictions are rapidly being conquered. Technological improvements have eliminated typhoid fever, pneumonia, smallpox and diphtheria as national health problems. Alexis Carrel, Jonas E. Salk, Wendell M. Stanley, William McD. Hammon, Joseph Erlanger, and numerous others—with new wonders like vitamins, sulfa drugs, antibiotics and hormones—have added many years to the lives of Americans. Delicate operations on heart, lungs, brain and other vital organs, impossible a few years ago, are now commonplace. Poliomyelitis and even cancer may be conquered shortly. The United States is the healthiest large nation today. How has this amazing record been made possible?

Our heritage of freedom has withstood the test of time and enables our people to progress. To us the individual with his inherent rights as a free man is more important than government, though it exists only to serve, not dominate, the people who support it. Free enterprise stimulates private doctors to initiative. They have courage and enthusiasm as free men to work faithfully at healing the sick. "The real miracle of American medical progress is the miracle of America itself—the motivating power of the American spirit, of free men, unshackled and unfettered, with freedom to think, to create, to cross new frontiers."⁽¹⁾

Several outstanding advantages are found only in this country and a few others, where private medical practice exists. We have more and better doctors than ever before. Our physicians are highly trained in the world's finest medical schools. Tireless effort on the part of the American Medical

Prize-winning essay in high school competition, sponsored by the Public Relations Committee, Medical Society of the State of North Carolina.

From Grade 12, Henderson High School, Vance County, North Carolina.

Association and medical institutions continue to improve the high standards. Expansion results only when top-quality training is available. Students are educated with well equipped laboratories, expert teachers. The individual student has personalized education. He learns by practicing at bedside and in laboratory, has access to many patients and wide experience. Complex, intensified training results in increasingly better qualified doctors. Modern facilities and expansion programs accelerate output of more doctors. The United States has more practicing physicians per capita than any other nation. Rapid expansion has come without destroying quality of education, for the medical profession recognizes that the number of doctors is not of supreme importance. One good doctor is worth 10 badly trained—especially in matters of life or death.

Doctor-Patient Relationship

Proper doctor-patient relation is realized under private medicine. We can choose our own family doctor, along with the hospital and type of treatment desired. With all his scientific skill and efficiency, the doctor is handicapped who cannot make his patient feel comfortable and confident. Intangible qualities—kindness, confidence, cheerfulness, enthusiasm, stability—bring out the best in anyone, make the patient feel relaxed and comfortable before his doctor. Better relations are built between patient and doctor, enabling the doctor to determine all he needs to know about the illness. The patient feels freer to tell his doctor his worries. Diagnosis is made faster; more effective treatment is prescribed.

The private doctor respects the individual. He is familiar with each patient's background and history, and knows what to expect. His medical records are kept confidential.

Your doctor is a friend who will be at your side when going gets rough. His main thought is to give unselfishly his services to mankind. The private doctor ministers to the sick, with no questions about financial status. "The prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration."⁽²⁾ Saving lives is the important thing. Under private medicine we trust our doctors. To no one else do we extend so

much faith except, perhaps, our religious leader. Whenever we or our loved ones are sick, we have deep feelings of dependence on our doctor's skill, experience and dedication. We know he will be on call at all hours. Leo E. Brown, public-relations director of the American Medical Association, sums it up; "Good public relations depend on prompt, courteous, efficient service made available twenty-four hours a day."⁽³⁾ The mail carriers' famous motto, "Neither snow, nor rain, nor heat, nor gloom of night stay these couriers from the swift completion of their appointed rounds," may be applied to physicians.

Medical Costs Under Private Practice

Private practice gives us the right to pre-paid medical care—of our own choice. Freedom of choice has resulted in astounding growth of voluntary health insurance plans. Numbers of people have endorsed these plans the past two decades. The keen competition among sponsors of insurance plans is desirable and truly American. Competition provides plenty of the best medical protection at the best price. Voluntary health insurance removes financial shock from illness or accident, for cost is low. An average Plan—guaranteeing approved medical, surgical and hospital care—costs \$2.50 a month for an individual and \$5.50 for a family, regardless of size. We have the world's finest medical insurance system. Let's keep it!

While costs of necessities have soared, medical costs are about the same as in 1939. Better techniques enable doctors to shorten your illness, so your total doctor bill is less than for similar service fifteen years ago. Hospital room rates have climbed, but your stay is shorter because of improved surgical methods, more effective drugs, new equipment, better over-all care. Therefore, your total hospital bill is often lower than ever before. Once-expensive drugs now cost less. From every angle, you are getting your money's worth in health.

Disadvantages of Socialized Medicine

In contrast to the brilliant record of private medicine in this country, stands the dismal picture of socialized medicine in other countries. Study points out many dangerous disadvantages of the latter. Socialization of medicine is degeneration of free-

dom into compulsion. Scientific progress stops; in its place spring sets of regulations forced on the medical profession by poorly informed bureaucrats. Independence of private medicine is destroyed along with proper patient-physician relation—a threat to health and freedom.

Socialized medicine gives the people inferior medical care. Waste and extravagance are characteristics of compulsory health plans. Towering bureaucracy eliminates freedom in choosing one's doctor, entangles doctor and patient with endless red tape which gives the physician little time for diagnosis and treatment. The government doctor's office is merely a pill mill where nothing can be done about the doctor who shirks his duty. Patients needing careful attention are rushed through, the same as hypochondriacs and goldbricks.

Costs of socialized medicine always soar far above estimates. Myriad nonmedical administrators are required in the burdensome system. Government siphons off huge amounts of tax money needed for the sick.

Medical tax would only make matters worse for the already over-taxed American people. "It would be just as if, in treating a man needing a transfusion, we took two pints of blood out of one arm and put one pint back into the other."⁽⁴⁾ Let us not be deceived by a false promise of something-for-nothing. Ask any American veteran who has experienced the assembly-line medical care of Army "sick call" if he wants the same regimentation, the waste of time and effort, for the whole country. His answer is simple: Medicine and politics don't mix.

Compulsory medicine invades sacred rights and privacy of individuals. Case histories of patients are handed to local boards; gossip results. Everything about the ailments is known to the public, especially in small towns. No matter how much this disgusting situation is resented by the populace, nothing can be done about it, for, once political medicine is accepted, government never relinquishes power. Would you want your medical affairs in the hands of a local board of political appointees?

National compulsory health insurance leads to ultimate socialization of the nation. Small breaches made in the wall of freedom by socialized medicine widen until the flood of socialization devours all industry, busi-

ness, religion, art, culture. "Social Security when carried to the extreme of socialized medicine finally becomes social insecurity."⁽⁵⁾ The fundamental precept of communism, laid down by Lenin himself, is that socialized medicine is the keystone in the arch of the Socialistic State. Slowly but surely freedom is taken away. Suddenly realization dawns that every vestige of it is gone and, once lost, can never be recovered. The grass may look greener on the other side of the fence, but it seldom is.

Conclusion

Our promising future can become real only while our doctors stay free. They are working hard clearing up inadequate distribution of doctors in rural sections and inability of the indigent to pay for medical services. They need the help of us all with these and other troubles. Everyone should stay alert and busy, for this is the way to preserve proper doctor-patient relationship, independence of medicine — indeed, our American way of life. It is our duty to cooperate with our medical profession so we may continue to enjoy the many advantages of private medical care.

References

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2. Kenny, J. T.: Principles of Medical Ethics, Section 1, Chap. 1, Westminster, Maryland, Newman Press, 1952.
3. Neal, G. E.: What You Can Do If You Think Your Doctor Is Wrong, Reader's Digest, January, 1955, p. 75.
4. Henderson, E. L.: Here's Health—the Voluntary Way, Reader's Digest, May 1950, p. 49.
5. DeTar, J. S.: Government Medicine in the Light of the Hoover Commission Report, Milan, Michigan, 1949.

Social medicine. Humanist though I am, and wholehearted supporter of the thesis that Medicine should be made 100 per cent available to the people, I have never been quite convinced that the notion underlying the new branch of it which has been called Social Medicine has justified. No colleague of mine brought a clearer mind to bear on most things that he handled than John Ryle, the first professor of social medicine in this country. But I could never rid my mind of the thought that Ryle got this thing mixed up with his political views, which were markedly socialistic.—Horder, L.: Fifty Years of Medicine, New York, Philosophical Library, 1954, p. 19.

Film Catalogue Available

Medical societies and individual physicians seeking information on current films available either for professional or lay groups should write to the A.M.A.'s Committee on Medical Motion Pictures for a copy of its latest catalog of medical and health films.

BULLETIN BOARD

COMING MEETINGS

North Carolina Public Health Association, Annual Meeting—Charlotte, May 31, June 1.

American College of Surgeons, Sectional Meetings—Jacksonville, January 16-18; Philadelphia, Pennsylvania, February 13-16; Milwaukee, February 27-29; Colorado Springs, Colorado, March 5-7; Little Rock Arkansas, March 12-13; Edmonton, Alberta, April 23-25.

University of Florida, Tenth Annual Midwinter Seminar on Ophthalmology and Otolaryngology—Miami Beach, January 16-21.

Council on Industrial Health, American Medical Association, Sixteenth Annual Congress on Industrial Health—Detroit, Michigan, January 23, 24.

American College of Radiology, Annual Meeting—Chicago, February 10, 1956.

New Orleans Graduate Medical Assembly—Municipal Auditorium, New Orleans, February 27-29.

American Academy of General Practice, Eighth Annual Scientific Assembly—Washington, D. C., March 19-22.

NEWS NOTES FROM THE DUKE UNIVERSITY SCHOOL OF MEDICINE

The nursing picture in North Carolina is brighter right now than at any time in the past, and it will continue to improve, F. Ross Porter, Duke Hospital superintendent, predicted recently.

"North Carolina has been successful in pulling ahead of most other states in this respect," Porter declared at a reunion of Duke Hospital administrative graduates who now hold responsible posts throughout the nation.

Porter, former president of the N. C. Hospital Association, is now delegate-at-large of the American Hospital Association.

* * *

The North Carolina Pediatric Society held its annual winter meeting at Duke University, November 18-19.

Dr. Jerome S. Harris, professor and chairman of pediatrics at Duke, presided at the Friday session, which included scientific papers by Dr. Judson Van Wyk, of the University of North Carolina; Dr. Horace L. Hodes, New York City; Dr. C. Nash Herndon, Bowman Gray School of Medicine, Winston-Salem; Dr. Jay M. Arena, Duke; and Dr. Doris Howell, Duke.

Topics covered included the cause and control of diarrhea, carriers of inherited disease, poison control, hematology, adrenal hyperplasia, treatment of acute polio, evaluation of growth and development, and acute nephritis.

Saturday's speakers were Dr. Weston Kelsey, Bowman Gray; Dr. James L. Wilson, Ann Arbor, Michigan; Dr. Nelson K. Ordway, University of North Carolina; and Dr. William deMaria, Duke. Dr. Edward C. Curnen, University of North Carolina, presided.

Dr. Charles F. Williams, of Raleigh, is vice president of the Society, and Dr. William Hersey Davis, Jr., Winston-Salem, is secretary-treasurer.

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Two Duke University specialists, Dr. E. Charles Kunkle, neurologist, and Dr. Ewald W. Busse, psychiatrist, described what the medical profession

knows about headaches, migraine in particular, during a national television program, "Medical Horizons," which originated in Durham on December 5.

Sponsored by Ciba Pharmaceutical Company in cooperation with the American Medical Association, the program is telecast weekly from medical centers throughout the nation, and is carried coast-to-coast on the ABC-TV network from 9:30 to 10 p.m.

NEWS NOTES FROM THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

A regional research conference of the American Psychiatric Association was held in Chapel Hill on Thursday and Friday, November 17-18, with participants from the southeastern states.

The Department of Psychiatry of the U.N.C. School of Medicine made arrangements for the gathering, which included panel sessions on "Drug Therapies," "The Therapeutic Relationship," and "Social Science Concepts and Techniques in Psychiatric Research."

Visiting authorities appearing on the program included Dr. Robert N. Butler of National Institute of Health, Bethesda, Maryland; Dr. J. Ross Hague, V. A. Hospital, Gulfport, Mississippi; Dr. Harold Ashbury, University of Virginia Hospital Charlottesville; Dr. Harold I. Lief, Tulane University; Dr. Carl A. Whitaker, Atlanta, Georgia; and Dr. Stanley L. Olinick, Washington, D. C.

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Dr. A. T. Miller, professor of physiology, University of North Carolina School of Medicine, attended a teaching symposium on the Basic Sciences in Aviation Medicine at the School of Aviation Medicine, Randolph Field, Texas, on November 14 and 15. This was the first of a projected series of symposiums on the role of the medical schools in training future physicians in those aspects of medicine essential for national defense. These symposiums are sponsored by the Medical Education for National Defense program, in which some 15 medical schools are currently participating.

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Dr. E. P. Hiatt, associate professor of physiology, attended the annual meeting of the American Heart Association in New Orleans, October 22-26, where he participated in the Scientific Sessions and served as a delegate from the North Carolina Heart Association to the General Assembly.

* * *

Dr. William J. Cromartie, associate professor of bacteriology and medicine, was guest speaker at a meeting of the Gamma Chapter of Alpha Epsilon Delta in Wake Forest on November 15, 1955. Dr. Cromartie is adviser of the local North Carolina Beta Chapter of Alpha Epsilon Delta, National Premedical Honor Society.

* * *

Dr. Nelson K. Ordway, professor of pediatrics, was elected vice-chairman of the Pediatrics Division of the Southern Medical Association at the Association's annual meeting in Houston, Texas, November 14-17, 1955.

* * *

Dr. K. M. Brinkhous, George Penick, and Cecil Hougie of the Pathology Department, of the U.N.C. Medical School, attended the Conference on Platelets of the National Research Council in Washington on November 18 and 19. Dr. Brinkhous, chairman of the National Research Council Panel on Blood Coagulation, was co-chairman of the conference.

Dr. Leroy W. Bowersox, a medical graduate of the University of California, joined the Pathology Department November 1 as an assistant resident in pathology. Dr. Bowersox has recently completed a tour of duty in the Army Medical Corps.

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Dr. Christopher T. Bever and Dr. Lucie Jessner of the Department of Psychiatry currently are teaching at the Washington Psychoanalytic Institute on a part-time basis, having been appointed to the teaching staff of the Institute several months ago. Dr. Bever, who is director of the Psychiatric Out-patient Clinic, conducts a course in "Dream Interpretation"; Dr. Jessner, who is head of the Child Psychiatry Unit, holds a seminar on "Child Development" at the Institute. The professors fly to Washington, D. C. bi-monthly.

* * *

Three doctors of the University of North Carolina School of Medicine presented papers at the Southern Medical Association meeting in Houston, Texas, on November 15-18: Their names and subjects follow:

Dr. Charles Flowers, Associate Professor of Obstetrics-gynecology — "An Evaluation of Sodium Pentothal for Delivery"

Dr. David A. Davis, professor of surgery—"Dolitrone—A New Intravenous Anesthetic: A Preliminary Report"

Dr. H. Robert Brashear, Assistant Professor of Surgery—"Pigmented Villonodular Synovitis."

* * *

Dr. Claude A. Tait, assistant resident in anesthesiology presented a paper on December 6 before the New York State Medical Society of Anesthesiology. The paper was entitled "Some Clinical Impressions of Dolitrone, A New Intravenous Anesthetic Drug."

NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE

At the meeting of the Southern Medical Association last month, Honorable Mention was given the exhibit of Dr. David Cayer, professor of gastroenterology at Bowman Gray, and Drs. Julian Ruffin, John Atwater, and Benjamin Oren of the Duke University School of Medicine. The exhibit, "Ulcer Pain: Mechanism of Relief by Anticholinergic Drugs," was prepared by the Department of Medical Illustration at Bowman Gray.

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Approval has been granted the Bowman Gray School of Medicine to establish a Sigma Xi Club, and the 11 charter members recently held their organization meeting, electing as president Dr. Richard L. Burt, instructor in obstetrics and gynecology; vice president, Dr. Manson Meads, associate professor and director of the Department of Preventive Medicine; and secretary-treasurer and chairman of general arrangements, Dr. Norman M. Sulkin, associate professor of anatomy. Monthly scientific sessions are planned, and will be open to interested scientists and engineers.

* * *

Dr. Harold D. Green, professor and director of the Department of Physiology and Pharmacology, recently attended the Fifth Conference on Shock and Circulatory Homeostasis of the Josiah Macy Foundation in Princeton, New Jersey. Dr. Green served as editor of the Proceedings of these conferences for the past five years. Dr. Green also took part in a panel, "Cardiac Physiology," at the meeting of the New York Society of Anesthesiologists.

Dr. Frank R. Lock, professor and director of the Department of Obstetrics and Gynecology, was among the 10 lecturers selected this year to participate in the Symposium on Obstetrics and Gynecology of the Twenty-seventh Annual Stuart McGuire Lecture Series, held at the Medical College of Virginia. Dr. Lock spoke on "The Menopause and Menopausal Syndrome" and the "Medical and Surgical Complications in Obstetrics."

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Dr. Manson Meads has returned to his duties as associate professor and director of the Department of Preventive Medicine, following two years in the Far East under assignment of the International Cooperation Administration as an adviser in medical education.

* * *

Early this month Dr. C. H. Mauzy, associate professor of obstetrics and gynecology, participated in the program of the Florida Obstetrics and Gynecology Society meeting in Miami. He spoke on "Postoperative Care" and "Solid Ovarian Tumors" in the first session, and "Urinary Stress Incontinence in Women" at the second session.

* * *

Dr. Ernest H. Yount, professor and director of the Department of Internal Medicine, spoke before the Buncombe County Medical Society last month on "Medical Management of Thyroid Disease."

* * *

A series of lectures and conferences, sponsored by the three North Carolina schools of medicine and the Radiologic Section of the Medical Society of North Carolina, were held on December 7. Dr. Erik Lindgren of Sweden, editor of *Acta Radiologica*, was guest lecturer.

NORTH CAROLINA PUBLIC HEALTH ASSOCIATION

The North Carolina Public Health Association has announced a change in the date for its meeting in 1956. The meeting will be held on May 31 and June 1 in Charlotte.

FORSYTH COUNTY MEDICAL SOCIETY

Dr. Gould Anderson, chief of Medical Services of Oak Ridge Institute of Nuclear Studies, addressed the Forsyth County Medical Society at its monthly meeting held on December 13 in Winston-Salem. His subject was "Some Consideration in the Treatment of Patients with Incurable Neoplasms."

NEWS NOTES

Dr. Norman Boyer has announced the opening of his office for the general practice of medicine and surgery at 26 West Jordan Street, Brevard.

* * *

The Navy Department has announced the promotion of Dr. Charles Bunch from the rank of Commander to Captain. Dr. Bunch is a member of the Medical Society of the State of North Carolina and the Mecklenburg County Medical Society, and practiced surgery in Charlotte before transferring to the regular Navy in 1949. He is now in Raleigh with the Office of Naval Officer Procurement.

* * *

Dr. Samuel Dace McPherson, Jr., of McPherson Hospital, Durham, has announced his return to the practice of ophthalmology following his release from the United States Navy.

AMERICAN COLLEGE OF SURGEONS

Southeastern Region

The first of six sectional meetings scheduled by the American College of Surgeons for 1956 will be held at the Hotel George Washington, Jacksonville, Florida, January 16-18. The surgical program will cover the ulcer problem, injuries to the spinal cord, biliary tract surgery, esophageal reconstruction with colon transplant, pancreatitis, ureteral injuries, arterial occlusions and aneurysms, a symposium on gynecology, and many other subjects.

Dr. Kenneth A. Morris is chairman of the local advisory committee on arrangements. For hotel accommodations write the Hotel George Washington.

A complete schedule of meetings will be found under "Coming Meetings."

CONGRESS ON INDUSTRIAL HEALTH

The sixteenth annual Congress on Industrial Health, under the joint sponsorship of the Council on Industrial Health of the American Medical Association, the Wayne County Medical Society, the Michigan State Medical Society, the Michigan Industrial Physicians' Club, and the Detroit Society for Surgery of Trauma, will be held at the Sheraton-Cadillac Hotel in Detroit on January 23 and 24. Principal speakers will be Dr. Elmer Hess, President of the A.M.A., and Benson Ford, vice president of the Ford Motor Company.

Among the general topics to be discussed are "Occupational Medicine in Industrial Relations," "Medicine's Responsibilities in the Automotive Age," and "Absence from Work Due to Nonoccupational Illness and Injury." At the annual dinner on Monday, January 23, the annual award will be made to a physician who has made an outstanding contribution to the welfare and employment of the nation's physically handicapped.

MISSISSIPPI VALLEY MEDICAL SOCIETY

After confining its activities for 21 years to the State of Illinois, Missouri and Iowa, the Mississippi Valley Medical Society is expanding to include the states of Minnesota and Wisconsin. This action was taken at the annual meeting of the officers, directors and trustees held at Quincy, Illinois, on November 20. The two new states will be headed by the newly created offices of vice president from Minnesota, to which Dr. Waltman Walters of the Mayo Clinic, Rochester, Minnesota, and vice president from Wisconsin, to which Dr. Arnold S. Jackson of the Jackson Clinic, Madison, Wisconsin, have been elected. Dr. Walters is the chief editor of the A.M.A. *Archives of Surgery*, and Dr. Jackson, the president of the U. S. Chapter of the International College of Surgeons.

The expansion program gives the M.V.M.S. all the states in the upper and central portion of the Mississippi Valley bordering on the Mississippi River. Furthermore this entire group of states has the meetings of their respective state medical societies in the spring. Since the M.V.M.S. has always held its meeting in the early fall, the meeting does not conflict with the respective state societies and the A.M.A. meetings.

The M.V.M.S. with headquarters at Quincy, Illinois, was organized at Quincy in 1935 and was incorporated not-for-profit in Illinois the same year. It has never had any salaried officers, and every dollar received goes back into the organization to provide more attractive meetings and to expand its activities. The twenty-first annual meeting will be held at the Hotel Morrison, Chicago, next September 26, 27, 28.

AMERICAN ACADEMY OF GENERAL PRACTICE

More than 5,000 of the nation's family doctors will attend the Eighth Annual American Academy of General Practice Scientific Assembly, March 19-22, 1956, in the Washington, D. C., Armory.

During the four-day scientific meeting, the doctors will hear 26 outstanding speakers discuss important subjects ranging from cardiac emergencies to primary wound repair. They will visit more than 60 scientific and 250 technical exhibits. High lights of the program, which has taken more than a year to plan, include two live clinics, a symposium on obstetrics and an address by Surgeon General Leonard Scheele. Special tours through the National Institute of Health, Bethesda, Maryland, have been arranged.

The Academy's policy-making Congress of Delegates will convene at 2 p.m., Saturday, March 17. All sessions of the Congress and many social functions will be held in the Hotel Statler.

Wednesday evening, March 21, following induction ceremonies for Academy President-elect J. S. DeTar, M.D., Milan, Michigan, more than 3,000 guests will attend a President's reception and dance honoring John R. Fowler, M.D., Barre, Massachusetts, president of the Academy.

The doctors' wives may attend a coffee hour-hat show and a luncheon-fashion show. They may also take interesting tours of the nation's capitol. A special children's tour will include visits to the Federal Bureau of Investigation office, the Capitol Building, the Washington Zoo, and the Smithsonian Institute.

AMERICAN COLLEGE OF RADIOLOGY

Dr. Samuel W. Donaldson of Ann Arbor, Michigan, and Dr. Eugene P. Pendergrass of Philadelphia, Pennsylvania, will be awarded the Gold Medal of the American College of Radiology, highest honor of the national medical organization, in recognition of the outstanding contributions during their careers to this medical specialty.

A spokesman for the College Board of Chancellors, governing body of the medical association, stated that Drs. Donaldson and Pendergrass would be presented the Gold Medals at ceremonies during the annual meeting of the College, February 10, 1956, in Chicago. Dr. Pendergrass is a native of Florence, South Carolina, and took his first two years of medicine at the University of North Carolina, receiving his M.D. degree from the University of Pennsylvania in 1918.

JOHN AND MARY R. MARKLE FOUNDATION

For the first time in its history, the income of the Markle Foundation exceeded \$1,000,000. Of this, the sum of \$660,000 was appropriated toward support of 22 Markle Scholars in Medical Science on the faculties of medical schools in the United States and Canada, to enable them to become established in teaching and research. Among the 22 medical schools receiving these five-year grants, each amounting to \$30,000 and payable at the rate of \$6,000 a year, were those at Johns Hopkins University, Washington University, Laval University, Yale University, University of Utah, Bowman Gray School of Medicine of Wake Forest College, and Western Reserve University.

The largest single grant made during the year, was \$100,000, given to Stanford University to assist in consolidating its medical school on the Stanford campus.

The John and Mary R. Markle Foundation, named for John Markle, Pennsylvania coal opera-

tor and his wife, was established in 1927. The assets are now approximately \$19,000,000. John M. Russell is executive director. Since 1947 the fund's chief program has been support of Markle Scholars in Medical Science, selected faculty members planning careers in teaching and research in medical schools.

(BULLETIN BOARD CONTINUED ON PAGE 610)

The Month in Washington

If advance signs mean anything, the Eisenhower Administration next year can be expected to ask Congress for substantially more money for medical research, both direct research by scientists on the U.S. payroll and grants to others.

Currently the federal government is spending more money on medical research than at any time in history—almost \$98 million through the National Institutes of Health alone. In addition, other millions are being spent on medical research in the Department of Defense, Veterans Administration, and other agencies. Much of it is difficult to isolate in the federal budget.

A special committee named by the National Science Foundation at the request of former Secretary Hobby has been at work for some time on an appraisal of HEW's medical research programs. Its report, due before the reconvening of Congress, should be valuable to both the administration and the appropriations committees.

A few examples of what is happening this year:

National Cancer Institute has \$24.8 million to spend, about three million more than last year, with two-thirds going out in grants to non-federal researchers. National Heart Institute also is working on a much more liberal budget, \$18.7 million in contrast to last year's \$16.6 million. Because of the spectacular publicity now being given to heart research as a consequence of President Eisenhower's illness, it is a foregone conclusion that next year this institute will get a great deal more money.

The Mental Health Institute is profiting by the largest single increase of any research operation, almost \$4 million, from \$14.1 to \$18 million. Here again the prospects are for a substantial increase next

year; problems of mental health are receiving much public attention, a situation that will not be ignored by Congress. Furthermore, the nationwide survey of mental health problems now about to get under way will point up the shortcomings in mental health research, and be an additional argument for more U.S. dollars.

All the other research institutes also shared in last session's Congressional generosity. The Institute of Arthritis and Metabolic Diseases has about \$2.5 million more, \$10.7 million instead of the \$8.2 million of last year. The Institute for Neurological Diseases and Blindness went from \$7.6 million to \$9.86 million, the Microbiological Institute from \$6.1 million to \$7.5 million, and the Dental Health Institute from \$1.9 to \$2.1.

As has been customary with recent Congresses, Senate and House this year actually voted more money for medical research than the Bureau of the Budget permitted Public Health Service to request. That may not be the situation when appropriation bills come up next session. Secretary Folsom of the Department of Health, Education, and Welfare did not take office until Congress was about to adjourn last summer, but since then he has repeatedly gone on the record in favor of even greater U.S. expenditures for research. In October Mr. Folsom declared:

" . . . Today we find new problems and new opportunities. We find that heart disease, and cancer and arthritis, are taking an increasing toll. And so today as a nation we are changing our lines of battle to fight this increase in chronic and major diseases. All the facts point to one great need. It is the need for more research—to learn how these chronic diseases are started, so they can be prevented; to learn to detect them in the early stages, so they can be cured . . . "

Again in November, addressing a conference on antibiotics, Mr. Folsom struck the same key, only this time more firmly. After noting that the U.S. now is spending over 12 times more on medical research than it was spending in 1946, he declared: "We must seriously consider making even more funds available for medical research to bring even greater benefits to humanity."

Notes

The Joint Congressional Committee on the Economic Report may have some health legislation to offer next year as a result of a study of the problems of the low-income family, including methods of paying hospital, physician, and drug bills.

* * *

The medical and criminal problems connected with narcotic addiction have occupied the attention of two Congressional groups between sessions, subcommittees of the Senate Judiciary Committee and the House Ways and Means Committee. The latter is particularly worried over abuses it claims to have discovered in the use of barbiturates and amphetamines.

* * *

Dr. Frank B. Berry, assistant Defense Secretary for Health and Medical Matters, in his annual report warns that the doctor procurement problem again may become acute, despite last summer's two-year extension of the act. He said the Department may not be able to obtain all the older physicians it needs because of the amendment barring the drafting of men over 35 if they have applied for a medical commission and been rejected on purely physical grounds. Also, Dr. Berry thinks the ratio of 3 physicians per 1,000 of troops may be too narrow a margin for safety.

Classified Advertisements

STATE HOSPITAL AT BUTNER. Positions available for young active practitioners, psychiatric experience desirable but not essential. Good living and working conditions. Please write in the first instance to: The Medical Superintendent, State Hospital at Butner, Butner, N. C.

WANTED—Assistant Resident Ophthalmological Service, N. C. Memorial Hospital, Chapel Hill, N. C. Address inquiries to: Chief, Division of Ophthalmology, Department of Surgery, School of Medicine, U.N.C., Chapel Hill, N. C.

WANTED—Locum tenens one month, January, 1956, during vacation. Orthopedic Residency. Write, call C. H. Frazier, Charity Hospital, New Orleans.

Few students of the problem today doubt that the current sharp decline in deaths from tuberculosis is due in great measure to modern methods of prevention and therapy. — Esmond R. Long, M.D., The Fielding H. Garrison Lecture, Bull. Hist. of Med. (July-Aug.) 1954.

BOOK REVIEWS

Present Day Psychology. Edited by A. A. Roback. 995 pages. Price, \$12.00. New York: Philosophical Library, Publishers, 1955.

This book, edited by A. A. Roback, is an excellent survey of contemporary psychology. It is composed of contributions from 40 experts, each explaining his own area of specialization. Roback separates his material into five divisions: Topical Departments, Branches, Dynamic and Clinical Psychology, Methods, and Borderlands and Humanistics. He then proceeds with a logical arrangement of the chapters, which display a surprising amount of unity considering the rather wide variety of contributors. This is evidently achieved to a great extent by the foresight of the author in constructing his editorial directives as well as by the arrangement of subject matter.

The author is to be complimented for his bravery in including controversial material such as parapsychology and psychology of religion. This indicates an admirable lack of bias, which is not generally characteristic of classical American psychologists.

This book will probably find its greatest attraction not in the field of psychology itself, but rather in the allied professions. It is rather "heavy" for popular consumption and for those professions too far removed from psychology whereas any well trained psychologist will probably be familiar with most of the subject matter covered.

Pediatric Gynecology. By Goodrich S. Schauffler. Ed. 3. 218 pages. Price, \$7.50. Chicago: The Year Book Publishers, 1953

When a pediatrician or a general practitioner is confronted with a gynecological problem in one of his little patients, he is usually glad to turn the little girl over to a consultant whom he considers better qualified to treat the condition—unless indeed it is an apparently simple case of vaginal discharge. Unfortunately, this is not always feasible, for geographic or other reasons. Furthermore, it can be distinctly harmful to subject a child to the emotional trauma attending treatment in a set-up designed for adult gynecology. And, besides, it is not easy to find a careful scientific treatment in a department of medical knowledge a little outside of the usual.

So it was with keen satisfaction that this reviewer discovered **Pediatric Gynecology**, by Goodrich Schauffler. Illustrated with photographs, drawings, diagrams, microscopic cross-sections, and x-ray plates, it takes up the subject with a thoroughness and completeness that is unexpected but most acceptable. Every aspect of the subject from embryology through surgery is treated exhaustively, but never exhaustively; and the bearing of anatomy, endocrinology and physiology are clearly brought out.

What is even more noteworthy is the manner in which the emotional angle of every situation connected with treatment of the little patient is discussed. And, something not too frequently encountered in pediatric literature, the emotional reaction of the parents, with its effect upon the youngster, is carefully diagnosed and evaluated. The false modesty of the parents, which complicates the task of the physician, and frequently changes what would have been a simple medical

or surgical situation into a highly dangerous emotional problem that may have lasting pernicious effects upon the little patient, is analyzed, with suggestions for handling it in a way that will do the least possible harm.

Two very valuable contributions are the chapters entitled "Social Connotations and Social Service Aspects" and "Medicolegal Aspects." Such matters as getting the child's story, uncomplicated by parental distortions; institutionalization versus foster home care; and agencies to which the physician may turn for help, are among the practical points brought out in the first of these chapters. The duties as well as the necessary steps for self-protection for the doctor involved in the troublesome cases involving rape, assault, age of consent, and other confusing subjects that can pack so much trouble for the incautious practitioner, are meticulously taken up in the last chapter. Many a legal tangle will be avoided by readers who study this chapter attentively.

The teaching skill of the faculty member of the University of Oregon Medical School, and the writing experience of the editor of the *Western Journal of Surgery, Obstetrics and Gynecology*, are plainly evident in this very helpful volume. It can be heartily recommended to gynecologists, pediatricians and general practitioners.

Child Behavior. By Frances L. Ilg, M.D., and Louise Bates Ames, Ph. D. Price, \$3.95. New York: Harper and Brothers, 1955.

In the profusion of books on child management issuing from the publishers these days, it is quite unusual to find the presentation of a fact or a principle that is really new, and that has not been discussed in other volumes. There is such a feature in *Child Development*, by Frances L. Ilg, M.D., and Louise Bates Ames, Ph.D. It is a principle which, if understood and acted upon, will enormously simplify the task of anyone dealing with the child from 2 to 10 years of age. So striking is it that it was discussed in the leading article of *Collier's Magazine* shortly after publication.

This helpful feature is the recognition that a child normally progresses through several age levels or stages, not steadily and uninterruptedly, but with alternations of "good" and "bad," as his elders would express it. The authors, from their years of experience with mothers and children in the former Yale University Medical School Clinic of Child Development, and the Gesell Institute of Child Development, and as mothers themselves, describe this very differently. They say that there are "ages when the child seems to be in better balance with himself and his world," and that these "alternate with ages when he appears to be unhappy and confused within himself and also at cross-purposes with much of the outside world."

For example, the child who takes his food docilely at a year, may make a shambles of his eating a few months later. The youngster who was so easy to manage at 2 is quite normal when at 2½ he wants to do everything himself, without assistance, and whenever he pleases, spurning directions or help, from anyone.

At 3 he calms down, while at 3½ he is insecure and troubled again—and his parents, needless to say, are troubled and insecure too! And so it goes, happy and peaceful periods alternating with troublesome, exasperating stages again and again in the years that follow. But while they state average ages for these transitions, the authors insist that they are by no means to be anticipated by the calendar.

An understanding of these rhythms and their inevitability, on the part of parents, does away with

much of the uncertainty and false emphasis so often placed upon "discipline" of the unvarying, unsympathetic kind, and helps them to be patient as they watch their child develop.

After explaining the different body types and explaining how heredity as well as environment shapes temperament and personality, the authors apply the principles they have laid down and explained, and relate them to the various departments of child conduct—eating, sleeping, elimination, posture, sex behavior, fears, and a thousand and one other facets of child behavior. Movies, comics, radio, TV, all are interpreted in relation to the basic trends explained so fully in the early part of the book.

The whole feeling throughout is one of encouragement for parents. Unlike so many books that leave fathers and mothers overcome with a sense of their unworthiness and inefficiency, this one leaves them with a feeling that they can be masters of a difficult situation. With the help of their pediatrician or family physician, they can decide matters sensibly and wisely, without being swayed by meddling advisers who are not to be depended upon.

Should the Patient Know the Truth? Edited by Samuel Standard, M.D., and Helmuth Nathan, M.D. 160 pages. Price, \$3.00. New York: Springer Publishing Company, Inc., 1955.

This book is composed of 24 contributions by physicians representing various branches of medicine, nurses, ministers of all faiths, and lawyers. As might be expected, there are 24 different opinions expressed — varying from Dr. Standard's "The answer must be no, if the knowledge of the truth will diminish his chances for recovery," and Henry Cave's "In the majority of instances, I am not in favor of telling the patient the truth," to Dr. Wangenstein's "Unconditionally, Yes."

The book will perhaps help, in the words of the late Woodrow Wilson, to clarify one's thinking on this important subject. The reader, however, will be left with the realization that he must be his own judge in each individual case. There are ways of letting a patient know by degrees that his condition is serious and that his prognosis is poor, without dealing him the knock-out blow of being too brutally frank. Herein one needs to practice the real art of medicine.

Perinatal Mortality in New York City, Responsible Factors. A Study of 955 Deaths. By the Subcommittee on Neonatal Mortality, Committee on Public Health Relations, The New York Academy of Medicine. Analyzed and Reported by Schwyler G. Kohl, M.S., M.D., Dr. P. H. 112 pages. Cambridge, Massachusetts: Harvard University Press, 1955.

The New York Academy of Medicine is to be congratulated on condensing an extensive statistical survey of 955 perinatal deaths in the city of New York into a mere 100 pages, with a minimum of statistics provided in the individual chapters.

The statistical tables are sufficiently condensed to be quite readable for the average reader. The book concerns itself primarily with the preventable factors in the 955 deaths.

The studies indicate that at least 35 per cent of the perinatal deaths are preventable. The preventable factors, by and large, were associated with errors in medical judgment or technique, unquali-

fied medical attendants, unsatisfactory pediatric care, faulty prenatal care, and neglect on the part of the family.

A brief description of the methodology is presented in the first two chapters. The deaths are then related to the various factors of responsibility as previously indicated, the obstetric care referring particularly to hospital and professional service. Maternal complications, analgesia, anesthesia, type of delivery, cause of death, and time of the mortality are likewise considered in separate chapter headings.

Polio Pioneers: The Story of the Fight Against Polio. By Dorothy and Philip Sterling. Illustrated with Photographs by Myron Ehrenberg and the National Foundation for Infantile Paralysis. 128 pages. Price, \$2.75. Garden City, New York: Doubleday & Company, 1955.

In this book about the age-long fight against poliomyelitis, the author and illustrators prove that authentic scientific research can make as fascinating a story for young readers as the imaginary exploits of a Captain Video or a Superman. Boys and girls who participated in the field trials of the Salk vaccine are here given an opportunity to learn about the many things that had to be discovered or learned before Dr. Salk could work out his formula. In the course of the story they will come to appreciate the part played by innumerable doctors, scientists, and laboratory technicians from many lands. And, in a larger sense, they may see how the scientific method is applied to the complex problems of disease.

Dorothy Sterling, a former staff member of Life, and her co-author husband, at present with the publicity department of CBS Radio, have the ability to make a complex subject comprehensible to young readers. The photographs by Myron Ehrenberg effectively high light the text.

Young people who are interested in what polio is, what causes it, and what may prevent and someday cure the disease would be fortunate to have this book placed in their hands.

In Memoriam

Harvey Bryan Wadsworth, M.D.

Dr. Harvey Bryan Wadsworth, 68, a native of Craven county and long a leading New Bern physician, died of coronary thrombosis on Thursday, September 1, in St. Luke's Hospital in New Bern. Dr. Wadsworth was the son of the late Edward W. and Elizabeth Bryan Wadsworth. He was born in the Fort Barnwell section of Craven County. He graduated from the University of North Carolina in 1909 and then attended Columbia University in New York. The following two years, he taught school in Wilson, North Carolina. He then attended Johns Hopkins Medical College in Baltimore, where he received his degree in medicine in 1919.

After serving his internship at Johns Hopkins Hospital, Dr. Wadsworth came to New Bern to begin the practice of medicine with Dr. R. S. Primrose in 1920. He was chief of staff of St. Luke's Hospital in New Bern.

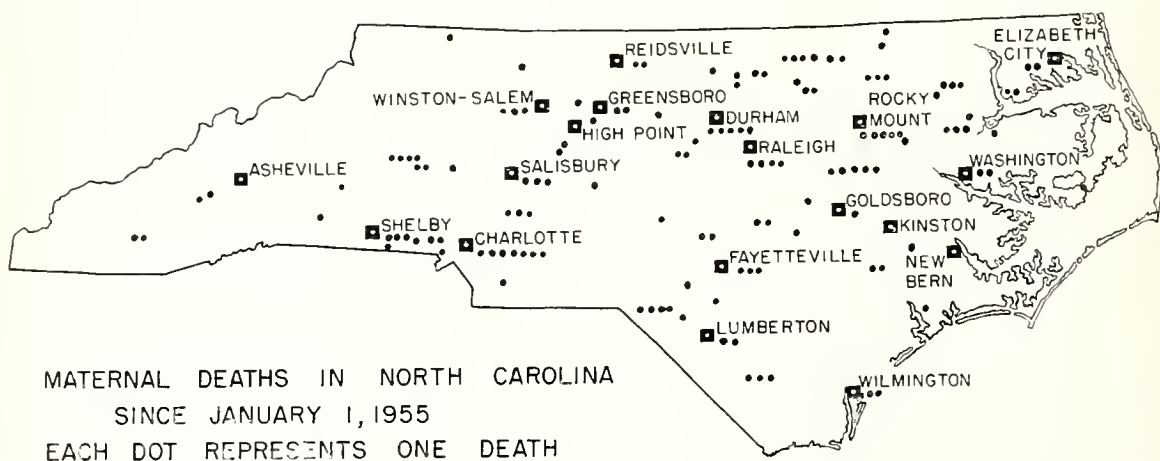
He is survived by his wife, Mrs. Grace Martin Wadsworth, and one daughter, Miss Sarah Poole Wadsworth. He was an honorary member of the Medical Society of the State of North Carolina.

Rockefeller Names Dr. Klumpp To New Rehabilitation Council

Theodore G. Klumpp, M.D., president of Winthrop-Stearns Inc., a pharmaceutical manufacturer here, has been appointed a member of the National Advisory Council on Vocational Rehabilitation, a new Federal agency organized to restore the nation's handicapped to useful lives.

The appointment was made for a four-year term by Nelson A. Rockefeller, Acting Secretary of the Department of Health, Education and Welfare, under terms of the Vocational Rehabilitation Act of 1954. Enacted unanimously by both Houses of Congress, the Act is the second to be passed in President Eisenhower's four-point national health program.

Long active in the drug industry, he is president of the National Pharmaceutical Council, vice president of the American Drug Manufacturers' Association and past president of the American Pharmaceutical Manufacturers' Association.



INDEX TO VOLUME 16*

January	Pages	1 to 38
February	Pages	39 to 78
March	Pages	79 to 118
April	Pages	119 to 158
May	Pages	159 to 198
June	Pages	199 to 238
July	Pages	239 to 278
August	Pages	279 to 390
September	Pages	391 to 462
October	Pages	463 to 510
November	Pages	511 to 558
December	Pages	559 to 610

KEY TO ABBREVIATIONS

C—Correspondence
 C&O—Committees and Organizations
 PM—President's Message

CONTRIBUTORS

- | | | |
|-----------------------------------|------------------------|---|
| Abdin, F. H., 210 | Gordon, J. S., 185 | Parker, R. T., 110, 570 |
| Alexander, E., Jr., 180 | Grassi, J. R., 171 | Parker, S. L., 119 |
| Ausherman, H. M., 492 | Greenberg, B. G., 391 | Parrish, H. M., 93 |
| Barefoot, S. W., 101, 473 | Hamilton, A. T., 183 | Pearse, R. L., 18 |
| Barnes, R. H., 25, 528 | Harper, R. N., 515 | Peck, W. M., 511 |
| Benbow, E. P., Jr., 185 | Harris, J. S., 559 | Peebles, C. H., Jr., 489 |
| Brantley, J., 540 | Hines, M., 239 | Perry, R. E., Jr., 567 |
| Bryan, A. H., 254 | Hinman, A., 5 | Peters, R. M., 204 |
| Bumgarner, J. R., 219 | Howell, R. W., 28 | Petty, T., 133 |
| Busse, E. W., 23, 528 | Humbert, W. C., 106 | Podger, K. A., 18 |
| Byerly, B. H., 470 | Jones, C. P., 570 | Powers, D., 99 |
| Caldwell, J., Jr., 130 | Kearns, P. R., 39 | Randolph, R., 595—C&O |
| Cameron, C. M., Jr., 391, 532 | Keith, J. F., Jr., 141 | Rapp, I. H., 57 |
| Cayer, D., 217 | Keith, M. J., 259 | Richman, S., 215 |
| Chandler, C. B., 489 | Kelsey, W. M., 97 | Rousseau, J. P., 190, 268, 281,
116, 503, 551—PM |
| Cheate, A. B., 267—C&O | Kitahata, L. M., 180 | Shands, H. C., 52 |
| Clark, H. T., Jr., 479 | Koomen, J., Jr., 532 | Sidbury, J. B., 3 |
| Cohen, L. D., 528 | Leary, D. C., 83 | Sidbury, J. B., Jr., 3 |
| Connar, R. G., 44 | Long, D., 261, 496 | Silverman, A. J., 25 |
| Cotton, H., 66 | Love, J. G., 163 | Smith, O. N., 578 |
| Crowell, J. A., 11 | Lund, H. Z., 161 | Sohmer, F., 169, 217 |
| Currie, D., 516 | Macomber, W. B., 259 | Spaeth, W., 49 |
| Davis, C. H., Jr., 180 | Manly, I. V., 204 | Strawcutter, H. E., 63 |
| Davison, W. C., 1, 159 | Margolis, R., 61 | Strobos, R., 563 |
| Deaton, W. R., Jr., 164 | Marshall, J. F., 544 | Thomas, W. L., 570 |
| Donnelly, J. F., 39, 133, 504—C&O | Marston, E. L., 577 | Van Sandt, M. M., 409 |
| Dorenbusch, A. A., 89 | McBryde, A., 159 | Verbeoff, D., 511 |
| Easley, E. B., 18 | McElrath, P. J., 127 | Vitols, M. M., 470 |
| Elfmom, S. L., 395 | Murray, R. G., 470 | Ward, F. P., 537 |
| Fuller, F. H., 119 | Norton, J. W. R., 200 | Webb, A., Jr., 79 |
| Gahwyler, M., 219 | Odum, G. L., 222 | Wiggins, J. C., Jr., 520 |
| Garber, E. C., Jr., 136 | Ormandy, R. B., 145 | Williams, R. W., 64 |
| Garvey, F. K., 63 | Owens, Z. D., 199 | Winter, F. C., 224, 470 |
| Glass, F. W., 169 | | Woodhall, B., 222 |
| Gobble, F. L., Jr., 133 | | |

*The title page to volume 16 will be found in the January issue.

ORIGINAL COMMUNICATIONS

- Abdominal Trauma, Nonpenetrating [Webb] 79
 Abdominoscrotal Hydrocele: A Case Report [Williams] 61
 Acetyl Ganthrin Therapy, The Results of, in One Hundred Patients with Urinary Tract Infection [Garvey and Straw-cutter] 63
 Adoptions, The Physician and [Choate] 267—C&O
 Aged, Factors Producing Ego Disintegration in the [Busse, Barnes, and Cohen] 528
 Aged, The Interrelationships Between Psychic and Physical Factors in the Production of Mental Illness in the [Barnes, Busse, and Silverman] 25
 Albright's Syndrome—See Polyostotic Fibrous Dysplasia
 Amnesia—See Loss of Memory, in a Pre-Adolescent Boy
 Analgesia and Anesthesia, Obstetric [Pearse, Easley, and Podger] 18
 Anesthesia—See Preoperative Care and Premedication
 Anesthesia, Obstetric Analgesia and [Pearse, Easley, and Podger] 18
 Aneurysm, Arteriovenous, Pulmonary [Deaton and Lund] 161
 Atopic Eczema, The Common Sense Management of [Barefoot] 173
 Bacterial Sensitivity to Certain Drugs as Determined in a Hospital Clinical Laboratory, An Analysis of [Perry] 567
 Brain—See Cerebral
 Breast, Carcinoma of the, Complicating Pregnancy, Report of an Eight-Year Cure [Marshall] 544
 Bronchoscopy and Esophagoscopy for Foreign Body, Historical Review of, Emphasizing Some of the More Recent Advances in Technique [Dorenbusch] 89
 Business Management of Medical Practice [Colton] 66
 Carcinoma of the Breast Complicating Pregnancy, Report of an Eight-Year Cure of [Marshall] 544
 Cardiac Conditions, A Review of the First 1000 Consecutive Maternal Deaths in North Carolina [Donnelly] 501—C&O
 Carpal Tunnel Syndrome, Median Neuritis or: Diagnosis and Treatment [Love] 463
 Cerebral Cortex in Primates, The Anatomic Basis for a New Concept of the Fundamental Activity of the [Hines] 239
 Childhood—See Infancy and Childhood
 Children, Common Speech Defects in [Ormandy] 145
 Children, Head Injuries in: Falls from Moving Automobiles [Kitahata, Alexander, and Davis] 180
 Children, Pinworm in, Treatment of, with Terramycin [Benbow] 185
 Children, Sinusitis in [Gordon] 185
 Children, Surgical Management of, Some Pulmonary Infections in [Peters and Manly] 204
 Children, Tuberculosis in, Trends in the Management of [Verboeff and Peek]
 Chlorpromazine in Ocular Surgery, The Use of [Byerly, Murray, Winter, and Vitols] 170
 Cholecystectomy—See Post-Cholecystectomy
 Congenital Heart Malformations, Surgically Correctable, The Diagnosis of [Harris] 559
 Chronic Diseases: A Joint Responsibility of Public Health and Private Practice [Norton] 200
 Civil Defense, Report on the Medical Aspects of, by the Implementation Committee of Region Three, Federal Civil Defense Administration [Van Sandt] 109
 Cortical Hyperostosis, Infantile [Sibbury and Sibbury] 3
 Diphtheria—A Continuing North Carolina Health Program [Koomen and Cameron] 532
 Diseases, Chronic: A Joint Responsibility of Public Health and Private Practice [Norton] 200
 Division of Health Affairs: Report of the Administrator, University of North Carolina, 1954-1955 [Clark] 479
 Doctors and Public Opinion [Rousseau] 503—PM
 Doctors, In Defense of Good [Rousseau] 116—PM
 Drugs, Bacterial Sensitivity to Certain, An Analysis of, as Determined in a Hospital Clinical Laboratory [Perry] 567
 Duodenal Obstruction Due to Annular Pancreas in a Patient with Co-existing Gastric Ulcer [Solmer and Glass] 169
 Dysplasia, Polyostotic Fibrous, with Extraskeletal Features: Report of a Case with Postmortem Observations [Wiggins] 520
 Early North Carolina Medicine: Smallpox in North Carolina, 197; Medical Journal of North Carolina, The [Long] 261
 Eczema, Atopic, The Common Sense Management of [Barefoot] 173
 Ego Disintegration in the Aged, Some Factors Producing [Busse, Barnes, and Cohen] 528
 Embolism, Pulmonary [Elfmom] 395
 Emphysema of the Lungs, Interstitial [Richman] 215
 Esophagoscopy—See Bronchoscopy and Esophagoscopy
 Eye Injuries from Christmas Toys [Currie] 516
 Fibroplasia, Retrorenal: Clinical and Therapeutic Observations [Chandler and Peebles] 189
 Fibroplasia, Retrorenal, Oxygen and [Winter] 224
 Foreign Body, Bronchoscopy and Esophagoscopy for: A Historical Review, Emphasizing Some of the More Recent Advances in Technique [Dorenbusch] 89
 Gangrene of the Leg in an Infant [Margolis] 61
 Ganthrin, Acetyl, Therapy, The Results of, in One Hundred Patients with Urinary Tract Infection [Garvey and Straw-cutter] 63
 Gastric Ulcer, Duodenal Obstruction Due to Annular Pancreas in a Patient with Co-existing [Solmer and Glass] 169
 Geriatrics—See Aged
 Head Injuries in Children: Falls from Moving Automobiles [Kitahata, Alexander, and Davis] 180
 Health Affairs, Division of: Report of the Administrator, University of North Carolina, 1954-1955 [Clark] 479
 Health Insurance, The Dilemma in North Carolina [Smith] 578
 Heart Failure, Congestive, The Management of [Ward] 587
 Heart Malformations, Congenital, Surgically Correctable, The Diagnosis of [Harris] 559
 Hemiplegia, Infantile, Acute [Hinman] 5
 Hernia, Indirect Inguinal, Simple High Ligation in Selected Cases of [Hamilton] 183
 Hodgkin's Paragranuloma Masked by Friedlander's Pneumonia: Report of a Case [Gahwyler and Baumgartner] 219
 Hydatidiform Mole and Toxemia of Pregnancy [Crowell] 11
 Hydrocele, Abdominoscrotal: A Case Report [Williams] 61
 Hyperostosis, Cortical, Infantile [Sibbury and Sibbury] 3
 Hyperterlorism: A Report of 2 Cases [Keith and Macomber] 259
 Infancy and Childhood, The Lump in [Rapp] 57
 Infancy, Therapeutic Misuse of Salicylate Compounds with Resulting Intoxication: A Report of Two Cases in [Keith] 111
 Infant, Gangrene of the Leg in an [Margolis] 61
 Infantile Cortical Hyperostosis [Sibbury and Sibbury] 3
 Infantile Hemiplegia, Acute [Hinman] 5
 Infection, Urinary Tract, The Results of Acetyl Ganthrin Therapy in One Hundred Patients with [Garvey and Straw-cutter] 63
 Infections, Pulmonary, in Children, Surgical Management of Some [Peters and Manly] 204
 Inguinal Hernia—See Hernia, Inguinal
 Injuries, Eye, from Christmas Toys [Currie] 516
 Injuries, Head, in Children: Falls from Moving Automobiles [Kitahata, Alexander, and Davis] 180
 Insulin Coma Therapy in a State Hospital [Harper] 515
 Intestinal Polyposis Associated with Abnormal Pigmentation of the Mucous Membranes and Skin: Peutz-Jeghers Syndrome [Solmer and Cayer]
 Jaundice, The Differential Diagnosis of [Connar] 44
 Leg, Gangrene of the, in an Infant [Margolis] 61
 Leg Ulcers, Chronic, A Method of Treating [Barefoot] 101
 Leptospirosis: Its Public Health Significance [Humbert] 106
 Ligation, Simple High, in Selected Cases of Indirect Inguinal Hernia [Hamilton] 183
 Ligations, Tubal, A Five-Year Survey of [Gobble, Petty and Donnelly] 133
 Lump, The, in Infancy and Childhood [Rapp] 57
 Loss of Memory, Functional, in a Pre-Adolescent Boy [Powers] 99
 Lung—See Pulmonary
 Lungs, Interstitial Emphysema of the [Richman] 215
 Maternal Deaths in North Carolina, A Review of the First 1000 Consecutive: Cardiac Conditions [Donnelly] 501—C&O
 Median Neuritis or Carpal Tunnel Syndrome [Love] 463
 Medical Aspects of Civil Defense, Report on, by the Implementation Committee of Region Three, Federal Civil Defense Administration [Van Sandt] 109
 Medical Care Commission, Summary of the Construction Program of the, and Future Needs of North Carolina [North Carolina Medical Care Commission] 71—C&O
 Medical Care, Private, The Advantages of [Randolph] 595—C&O
 Medical Journal of North Carolina, The, Early North Carolina Medicine [Long] 261
 Medical Practice, Business Management of [Colton] 66
 Medicine, The Golden Age of, [Davidson] 1
 Medicine, The Human Side of [Owens] 199
 Memory, Functional Loss of, in a Pre-Adolescent Boy [Powers] 99
 Mental Illness in the Aged, The Interrelationship Between Psychic and Physical Factors in the Production of [Barnes, Busse, and Silverman] 25
 Mole—See Hydatidiform Mole
 Neuritis, Median, or Carpal Tunnel Syndrome: Diagnosis and Treatment [Love] 463
 North Carolina Health Problem, A Continuing, Diphtheria—[Koomen and Cameron] 532
 North Carolina Medical Journal See Medical Journal of North Carolina
 North Carolina Medicine, Early: Smallpox in North Carolina, 197; Medical Journal of North Carolina, The [Long] 261

- North Carolina Program, the, Sterilization—[Advisory Committee to the North Carolina State Board of Public Welfare] 71—C&O
- North Carolina, The Health Insurance Dilemma in [Smith] 578
- North Carolina, The Probable Influence of Salk Poliomyelitis Vaccine on Reported Poliomyelitis in [Greenberg and Cameron] 391
- Negro Physicians—Qualified, Question of Admission to Membership in the Medical Society of North Carolina [President's Committee] 229—C&O
- Obstetrics—See Rooming In
- Obesity and the Public Health [Bryan] 251
- Obstetric Analgesia and Anesthesia [Pearse, Easley, and Podger] 18
- Obstetrics, Symposium on, 119
- Rapture of the Pregnant Uterus with Presentation of 7 Cases [Parker, Parker, and Fuller] 119
- Rapture of the Pregnant Uterus [McElrath] 127
- Pre-Toxemia of Pregnancy [Caldwell] 130
- A Five-Year Survey of Tubal Ligations [Gobbie, Petty, and Donnelly] 133
- The Diagnosis of Ectopic Pregnancy: A Review and Case Reports [Garber] 136
- Obstetrics, The Place of Podalic Version and Extraction in, Today [Leary] 83
- Ocular Surgery, The Use of Chlorpromazine in [Byerly, Murray, Winter, and Vitols] 470
- Oxygen and Retrolental Fibroplasia [Winter] 221
- Pancreas, Annular, Duodenal Obstruction Due to, in a Patient with Co-existing Gastric Ulcer [Sohmer and Glass] 169
- Paragranuloma, Hodgkin's, Masked by Friedlander's Pneumonia [Gawlyer and Bungarner] 219
- Peutz-Jeghers Syndrome, Intestinal Polyposis Associated with Abnormal Pigmentation of the Mucous Membranes and Skin: [Sohmer and Cayer] 217
- Physician-Patient Relationship, The [Rousseau] 551 PM
- Physician, The, and Adoptions [Choate] 267—C&O
- Pinworm in Children, Treatment of, with Terramycin [Benbow] 185
- Placenta, Premature Separation of the, Current Concepts Regarding the Management of [Brantley] 540
- Pneumonia, Friedlander's, Hodgkin's Paragranuloma Masked by [Gawlyer and Bungarner] 219
- Podalic Version and Extraction, The Place of, in Obstetrics Today [Leary] 83
- Poliomyelitis Vaccine, Salk, North Carolina State Advisory Committee on, 267—C&O
- Poliomyelitis Vaccine, Salk, The Probable Influence of, on Reported Poliomyelitis in North Carolina [Greenberg and Cameron] 391
- Polycystic Fibrous Dysplasia with Extraskelatal Features: Report of a Case with Postmortem Observations [Wiggins] 520
- Polyposis, Intestinal, Associated with Abnormal Pigmentation of the Mucous Membranes and Skin: Peutz-Jeghers Syndrome [Sohmer and Cayer] 217
- Post-Cholecystectomy: A Clinical Syndrome [Marston] 577
- Pregnancy, Carcinoma of the Breast Complicating, Report of an Eight-Year Cure of [Marshall] 544
- Pregnancy, Ectopic, The Diagnosis of: A Review and Case Reports [Garber] 136
- Pregnancy, Pre-toxemia of [Caldwell] 130
- Pregnancy, Thromboplastic Complications of [Donnelly and Kearns] 39
- Pregnancy, Toxemia of, Hydatidiform Mole and [Gawlyer and Bungarner] 219
- Pregnant Uterus, Rupture of, with Presentation of 7 Cases [Parker, Parker, and Fuller] 119
- Pregnant Uterus, Rupture of the, with Presentation of 7 Cases Premature Separation of the Placenta, Current Concepts Regarding the Management of [Brantley] 540
- Preoperative Care and Premedication [Ausherman] 492
- Pre-Toxemia of Pregnancy [Caldwell] 130
- Pruritus Vulvae [Parker, Jones, and Thomas] 570
- Psychiatry, Preventive, The Physician's Role in [Howell] 28
- Psychological Clinics, School: The Preschool Psychological Clinic [Grassi] 171
- Public Health, Chronic Diseases—A Joint Responsibility of Private Practice and [Norton] 200
- Public Health, Obesity and the [Bryan] 251
- Public Health Significance, Leptospirosis: Its [Humbert] 406
- Public Opinion, Doctors and [Rousseau] 503—PM
- Pulmonary Arteriovenous Aneurysm [Deaton and Lund] 164
- Pulmonary Embolism [Elfmom] 395
- Pulmonary Infections in Children, Surgical Management of Some [Peters and Manly] 201
- Retrolental Fibroplasia—See Fibroplasia, Retrolental
- Rooming In [McBryde and Davison] 159
- Salk Poliomyelitis Vaccine, North Carolina State Advisory Committee on the, 267—C&O
- Salk Poliomyelitis Vaccine, The Probable Influence of, on Reported Poliomyelitis in North Carolina [Greenberg and Cameron] 391
- Salicylate Compounds, Therapeutic Misuse of, with Resulting Intoxication: A Report of 2 Cases in Infancy [Keith] 141
- School Psychological Clinics: The Preschool Psychological Clinic [Grassi] 171
- Sick People, Some Problems of Talking to [Shands] 52
- Sinusitis in Children [Gordon] 485
- Skin, Abnormal Pigmentation of the Mucous Membranes and, Intestinal Polyposis Associated with [Sohmer and Cayer] 217
- Smallpox in North Carolina, Early North Carolina Medicine: [Loug] 497
- Snakebite Wounds in Dogs, Early Excision and Suction of [Parrish] 93
- Sodium Lactate, Contraindications to the Use of Large Amounts of [Kelsey] 97
- Some Problems of Talking to Sick People [Shands] 52
- Speech Defects, Common, in Children [Ormandy] 145
- Splenic Flexure Syndrome, The [Spaeth] 49
- Sterilization—The North Carolina Program [Advisory Committee to the North Carolina State Board of Public Welfare] 71—C&O
- Stilbamidine Treatment of Tic Douloureux [Woodhall and Odom] 222
- Surgery, Ocular, The Use of Chlorpromazine in [Byerly, Murray, Winter, and Vitols] 470
- Surgical Management of Some Pulmonary Infections in Children [Peters and Manly] 201
- Synovial Origin, Tumors of [Abdin] 210
- Temporal Lobe, The [Strobus] 563
- Terramycin, Treatment of Pinworm in Children with [Benbow] 185
- Thromboplastic Complications of Pregnancy [Donnelly and Kearns] 39
- Tic Douloureux, Stilbamidine Treatment of [Woodhall and Odom] 222
- Toxemia—See also Pre-Toxemia of Pregnancy
- Toxemia of Pregnancy, Hydatidiform Mole and [Crowell] 11
- Trauma, Abdominal, Nonpenetrating [Webb] 79
- Tubal Ligations, A Five-Year Survey of [Gobbie, Petty, and Donnelly] 133
- Tuberculosis in Children, Trends in the Management of [Verboeff and Peck] 511
- Tumors of Synovial Origin [Abdin] 210
- Version, Podalic, and Extraction, The Place of, in Obstetrics Today [Leary] 83
- Ulcer, Gastric, Duodenal Obstruction Due to Annular Pancreas in a Patient with Co-existing [Sohmer and Glass] 169
- Ulcers, Chronic, Leg, A Method of Treating [Barefoot] 101
- Urinary Tract Infection, The Results of Acetyl Gantrisin Therapy in One Hundred Patients with [Garvey and Strawcutter] 63
- Uterus, Pregnant, Rupture of the, with Presentation of 7 Cases [Parker, Parker, and Fuller] 119
- Urology—See Urinary Tract
- Vulvae, Pruritus [Parker, Jones, and Thomas] 570

EDITORIALS

- A.M.A.'s One Hundred and Fourth Annual Meeting, The, 226
 A.M.A. News Notes, 227
 American Medical Association, Dr. Millard Hill Elected Vice President of the, 228
 Aspirin, Cortisone Versus, 502
 Bahmson, Dr. Henry, An Orchid for, 150
 Berryhill, Dr. Reece, Honored, 519
 Births, Highest Number of, Lowest Death Rate—, 70
 Bonner, Dr. Kemp, P. B., 280
 Britain, Medicine's Changing Face in, 266
 Christmas Message, A, 593
 Christmas Toys, Eye Injuries from, 550
 Cobb, Dr. Donnell, 593
 Constructive Suggestions for a Federal Budget, 103
 Contributions, Scaring, out of People, 119
 Cortisone Versus Aspirin, 502
 Death Rate, Lowest—Highest Number of Births, 70
 Drug Prices, Need for Public Understanding of, 31
 Duke Hospital Admissions Pass the Half Million Mark, 70
 Duke's Silver Anniversary, 266
 Easter Seals Are Symbols of Hope, 101
 Eye Injuries from Christmas Toys, 550
 Federal Budget, Constructive Suggestions for a, 103
 General Practice Prior to Specialization, 265
 Health Insurance, Government, in Japan, 414
 Hill, Dr. Millard, Elected Vice President of the American Medical Association, 228
 Horderisms, 502
 Interlingua, 500
 Japan, Government Health Insurance in, 414
 Kitchin, Dr. Thurman D., 414
 Lowest Death Rate—Highest Number of Births, 70
 Medical Practices, 261
 Medical Research Foundation, United, 518
 Medical School Myths, 593
 Medical Society of the State of North Carolina
 One Hundred and First Annual Session, 187
 Medicine's Changing Face in Britain, 266
 Need for Public Understanding of Drug Prices, 31
 Needed: A Clear Focus on Tuberculosis, 550
 Negro Physicians to be Admitted to the State Medical Society, 189
 New Year's Resolution, 32
 No Appeasement, 500
 Norton, Dr. Roy, Honored, 70
 Obesity, The Problem of, 150
 One Hundred and First Annual Session, The, 187
 Editorial Notes, 189
 Optometry Executive Council Apologizes, The, 70
 Personal Equation in Research, The, 414
 Physicians Urged to Report Use of Salk Vaccine, 265
 Polio Vaccine, Salk, Found Effective, 118
 Re-evaluation of Sulfonamide Therapy, A, 414
 Research, The Personal Equation in, 414
 Salk Polio Vaccine Found Effective, 118
 Salk Vaccine, Physicians Urged to Report Use of, 265
 Scaring Contributions out of People, 119
 Science and Faith, 592
 Scientists Appeal for Abolition of War, 413
 Should State Taxes Be Lowered, 32
 Social Security Amendments, Proposed, 591
 South Carolina Journal's Fiftieth Anniversary, 280
 Specialization, General Practice Prior to, 265
 Spiritual Rebirth Urged, A, 31
 State Medical Society, Negro Physicians to be Admitted to, 189
 State Society Memberships, New, Reduced July 1, 228
 Sulfonamide Therapy, A Re-evaluation of, 414
 Taxes, State, Should, be Lowered? 32
 Taylor, Dr. Frederick R., 550
 Times Change—Or Do They? 228
 Tuberculosis, Needed: A Clear Focus on, 550
 United Medical Research Foundation, 518
 Vernon, Dr. James, 279
 War, Scientists Appeal for Abolition of, 413
 WCUNC-TV—Channel, 1, 69
 Yoo Yoo—A New Synonym for G. O. K., 104

SOCIETIES AND ORGANIZATIONS

- Academy of Psychosomatic Medicine, 419
 American Academy of General Practice, 114, 600
 American Board of Clinical Chemistry, 274
 American Board of Obstetrics and Gynecology, 420
 American Cancer Society, North Carolina Division, 418, 551
 American College of Allergists, 114
 American College of Chest Physicians, 275, 284
 American College of Gastroenterology, 157, 273, 420
 Southern Region, 114
 American College of Radiology, 235, 421, 600
 American College of Surgeons, 35, 421, 600
 American Conference of Governmental and Industrial Hygienists, 194
 American Congress on Physical Medicine and Rehabilitation, 38
 American Dermatological Association, 275
 American Hearing Society, 76, 158, 235, 420, 510
 American Industrial Hygiene Association, 158
 American Institute of Dental Medicine, 114
 American Medical Association, 34, 77, 112, 154, 193, 191, 234, 272, 283, 419, 509, 555
 The Month in Washington, 36, 78, 117, 197, 237, 276, 390, 422, 601
 American Medical Education Foundation, 235, 420
 American Medical Writers' Association, 235, 274, 510, 558
 American Pharmaceutical Manufacturers Association, 610
 American Protologic Society, 194
 American Red Cross, 35
 American Society of Plastic and Reconstructive Surgery, 113
 American Urological Association, 274
 Armed Forces Institute of Pathology, 77
 Association of Life Insurance Medical Directors, 557
 Association of Military Surgeons, 284
 Auxiliary to the American Medical Association, 193
 Auxiliary to the Medical Society of the State of North Carolina
 Program of the Thirty-Second Annual Session, 109
 Roster of Members, 447
 Transactions of the Thirty-Second Annual Session, 123
 Blue Shield Medical Care Plans, 194, 278
 Bowman Gray School of Medicine of Wake Forest College, 553, 599
 Caleb Fiske Fund, 420
 Calvert School for Home-Bound Students, 194
 Cancer Chemotherapy National Committee, 236
 Coming Meetings, 33, 74, 110, 151, 190, 233, 270, 282, 417, 507, 553, 598
 Committees and Organizations, 71, 229, 267, 504
 Conference on Rural Health (State) 33
 Congress on Industrial Health, 600
 Congress on Medical Education and Licensure 38
 County Societies, 33, 76, 112, 154, 192, 272, 283, 418, 554, 599
 Duke University School of Medicine, 33, 76, 110, 152, 190, 233, 270, 282, 418, 509, 598
 Emory University School of Medicine, 272, 418
 Endocrine Society, 283
 Fiske Fund, 420
 Florence Crittenden Home, 153
 Forsyth County Cancer Symposium, 33
 Gaston Memorial Hospital Medical Symposium, 553
 Gill Memorial Eye, Ear and Throat Hospital, 76
 Greensboro Academy of Medicine, 76
 Hamilton College, 236
 Harvard University School of Public Health, 35
 Health Insurance Council, 275
 Hebrew Medical Journal, 157
 Hospital Food Service Institute, 192
 Industrial Health Conference 114
 Institute of Industrial Health, 278, 510

- Institute of Life Insurance, 158
 International College of Surgeons, 76
 International Congress of Otolaryngology, 236
- Joint Blood Council, 555
- Keeley Institute, 192
- Louisiana State University School of Medicine, 111
- Markle Foundation, 35, 155, 600
- Medical Society of the State of North Carolina
 Advisory Committee to the North Carolina State Board of Public Welfare, 71, 267
 Alphabetical List of Fellows for 1955, Supplement to the August issue
 Committee to Study and Make Recommendations Concerning the Question of Admission of Qualified Negro Physicians to Membership in the Medical Society of the State of North Carolina, 229
 Committees, Supplement to the August issue
 Maternal Welfare Committee, 501
 Maternal Deaths in North Carolina, 38, 115, 198, 238, 268, 421, 506
 Officers, Supplement to the August issue
 One Hundred and First Annual Session
 President's Address, 199
 Program, 105
 Transactions, 285
 Executive Council Meetings, 297
 General Sessions, 379
 Historical Data, 286
 House of Delegates, Sessions of the, 308
 Index to Reports and Resolutions, 285
 President's Message, 190, 268, 281, 416, 503, 551, 594
 Roster of Fellows by Counties Supplement to the August issue
- Mississippi Valley Medical Society, 76, 274, 310, 557, 600
- Nalle Clinic Foundation, 110, 153
- National Foundation for Infantile Paralysis, 420
- National Multiple Sclerosis Society, 155, 273, 420
- National Rural Health Conference, 31
- National Society for Crippled Children and Adults, 610
- National Vitamin Foundation, 557
- New Hanover County Medical Symposium, 272
- New York Academy of Medicine, 274
- News Notes, 33, 112, 154, 234, 272, 283, 418, 599
- North Carolina Academy of General Practice, 117
- North Carolina Advisory Committee on Salk Poliomyelitis Vaccine, 267
- North Carolina Dietetic Association, 192
- North Carolina Division, American Cancer Society, 118, 554
- North Carolina EENT Society, 270
- North Carolina Heart Association, 282
- North Carolina Medical Care Commission, 72
- North Carolina Mental Hygiene Society, 153
- North Carolina Public Health Association, 599
- North Carolina Rural Health Conference, 33
- North Carolina Society for Crippled Children and Adults, 234
- North Carolina Society of Anesthesiologists, 417
- North Carolina State Board of Health, 153, 234, 272, 509, 552
 Accident Prevention Section, 192
- North Carolina State Board of Medical Examiners, 33, 110, 153, 283
- North Carolina State Board of Public Welfare
 North Carolina Statewide Safety Conference, 192
- North Carolina Surgical Association, 234, 554
- North Carolina Tuberculosis Association, 153, 234, 554
- Pan American Association of Ophthalmology, 157, 284
- Pan American Sanitary Bureau, 558
- Public Relations Institute (A.M.A.), 272
- Raleigh, Academy of Medicine, 507
 Resident Physician, 421
 Rural Health Conference, 33
- Seminar on Industrial Health, 76
- Society for the Prevention of Asphyxial Death, 158
- South Atlantic Association of Obstetricians and Gynecologists, 112
- Southeastern Allergy Association, 76
- Southeastern Surgical Congress, 34
- Southern Medical Association, 418
- Southern Pediatric Seminar, 154
- Southern Regional Program of Graduate Education, 193
- Standard Nomenclature Institute, 273
- Student American Medical Association, 155
- Tobacco Industry Research Committee, 275, 610
- Trudeau School of Tuberculosis, 157
- United Cerebral Palsy, 274, 310, 557, 610
- University of Florida Seminar on Ophthalmology and Otolaryngology, 555
- University of North Carolina School of Medicine, 74, 111, 151, 191, 233, 271, 282, 507, 553, 598
- U.S. Air Force, 115, 237, 278
- U.S. Atomic Energy Commission, 115, 158, 237, 558
- U.S. Department of the Army, 115, 158, 195, 278, 462, 558
- U.S. Department of Health, Education and Welfare, 38, 115, 158, 195, 278, 462
- Veterans Administration, 77, 115, 197, 236, 278, 284, 462, 558, 610
- Watts Hospital Medical and Surgical Symposium, 33
- Winston-Salem Heart Symposium, 282

BOOK REVIEWS

- Committee on Public Health Relations. The New York Academy of Medicine: Prenatal Mortality in New York City, 603
- ILL, F. L., AND AMES, L. B.: Child Behavior, 603
- HARROW, B.: Casimir Funk: Pioneer in Vitamins and Hormones, 277
- MORGAN, W., AND MORGAN, M.: Thinking Together About Marriage and Family, 197
- ROBACK, A. A. (ed.): Present Day Psychology, 603
- SARTON, G. A. L.: Galen of Pergamon, 37
- SCHAUFLER, G. S. (ed.): Pediatric Gynecology, 602
- SCHIFFERS, J. J.: Healthier Living, 116
- SHEPS, C. G., AND TAYLOR, E. H.: Needed Research in Health and Medical Care, 116
- STANBORN, S., AND NATHAN, H.: Should the Patient Know the Truth?, 603
- STERLING, D., AND STERLING, P.: Polio Pioneers: The Story of the Fight Against Polio, 604
- TAINTER, M. L., AND ALMY, T. P.: The Colon: Its Normal and Abnormal Physiology, 277
- VAUGHAN, W. T. (Revised by J. Harvey Black): Primer of Allergy, 116
- Yost, O. R.: What You Should Know About Mental Illness, 37

IN MEMORIAM

Cranmer, John B., M.D.
 Crisp, Sellers Mark, M.D.
 Wadsworth, Harvey Bryan, M.D., 604

BULLETIN BOARD

(CONTINUED FROM PAGE 601)

NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

Dean W. Roberts, M.D., of Baltimore, Maryland, nationally known medical administrator, physician and leader in the field of public health, has been appointed executive director of the National Society for Crippled Children and Adults, it is announced by Edgar Kobak, New York, president.

Dr. Roberts, since 1952 director of the pioneering national Commission on Chronic Illness, succeeds Lawrence J. Linck, who has been executive director of the National Society since 1945. He will take over his duties as soon as he is able to fulfill his responsibilities in completing the work of the commission.

UNITED CEREBRAL PALSY

A new discovery that the protective sheath of certain nerve fibers is formed in a spiral pattern, much as insulating tape is wound around electric wire, was reported by a young woman scientist at a Research Symposium held in connection with the Sixth Annual Convention of United Cerebral Palsy in Boston last month.

The scientist, Dr. Betty Ben Geren, research associate on the faculty of Harvard Medical School and associate pathologist at Children's Medical Center, Boston, explained that her observations were made largely with the aid of an electron microscope which magnifies objects up to 20,000 times their original size and also with polaroid light and x-ray diffraction. Her observations were made on embryos of chicks, mice, and to a limited degree on human specimens.

Her discovery is a major scientific breakthrough into a little-known area of the nervous system and may have far-reaching implications for a number of neurological disorders, including cerebral palsy, it was explained by Dr. Glidden L. Brooks, medical director of United Cerebral Palsy.

* * *

Various ways in which nature's "family blueprint" can cause irreparable damage to the developing nervous system were described today by a number of Boston scientists at a research symposium held in connection with the annual convention.

Such basic studies, financed or co-supported by United Cerebral Palsy, are intended to throw new light on the nature and function of the central nervous system. Damage to this system produces cerebral palsy.

CENTER FOR MASS COMMUNICATION

A completely revised, sound version of the film, "Development of the Gastro-Intestinal Tract," has just been released by The Center for Mass Communication of Columbia University Press. The 35 minute film, in color, was produced by Joseph J. McDonald, M.D., professor of clinical surgery at the College of Physicians, Columbia University, and at present the dean of medical faculty at the American University of Beirut, Lebanon.

Prints in 16mm for use by medical schools are available either for rental or purchase exclusively from The Center for Mass Communication, of Columbia University Press, New York 25, New York.

AMERICAN PHARMACEUTICAL MANUFACTURERS' ASSOCIATION

Leaders of the fields of government, industry, medicine, education and journalism participated in the three-day meeting of the American Pharmaceutical Manufacturers' Association, held in New York, December 12-14.

TOBACCO INDUSTRY RESEARCH COMMITTEE

Research grants approved by the Tobacco Industry Research Committee in the last year passed the \$838,000 mark today with the announcement of new grants to 19 scientists and renewal of nine previous grants.

The new grants and renewals total more than \$355,000, said Timothy V. Hartnett, chairman of the committee, which sponsors research into tobacco use and health by independent scientists at recognized hospitals, laboratories, and medical schools throughout the country. The committee has set up a \$1,000,000 research fund and has pledged more support as the need develops.

Grants are made by the committee upon recommendation of a Scientific Advisory Board of nine noted doctors, scientists, and educators who direct the committee's research program and policy. Chairman of the board and also scientific director of the committee is Dr. Clarence Cook Little, head of the Roscoe B. Jackson Memorial Laboratory at Bar Harbor, Maine.

The Tobacco Industry Research Committee, formed in 1954 to support independent scientific research into tobacco use and health, is comprised of representatives of tobacco manufacturers and associations of growers and warehousemen. The committee also provided a fund of \$25,800 to sponsor fellowships in 1955 for medical students into basic and experimental sciences.

VETERANS ADMINISTRATION

For the first time in medical history, Veterans Administration will make an extensive evaluation of mental patient care to determine what types of treatment and hospitals best promote the improvement or recovery of its psychiatric patients and the relative costs.

VA, which has one of the nation's largest psychiatric patient loads under a single medical management, said the preliminary phases of the pioneering project have been started. The study will continue for five years, with probably 15 of VA's 40 neuropsychiatric hospitals participating, according to Dr. Jesse F. Casey, director of psychiatry and neurology service.

* * *

Long-term veteran patients, some hospitalized 20 years or more, will be concentrated in special sections of Veterans Administration hospitals for a new program of "all-out" specialized treatment to promote their recovery or to prevent further loss of body and mind functions.

Termed an advanced concept in the care of chronically ill veterans, the intermediate program, as it is known, is underway in 30 VA hospitals and will be expanded to others as rapidly as they qualify, Dr. William S. Middleton, Chief Medical Director, said.

Dr. Middleton explained that the functions of the program is to provide active rather than custodial care for those long-term patients in the VA hospital system who no longer need definitive hospital treatment, cannot return home, and lack the capabilities necessary for the new planned-living program in VA domiciliaries.





